



Fisheries and Oceans  
Canada

Pêches et Océans  
Canada



# 2022-23

# Departmental Plan





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## From the Minister

The world's oceans are one of nature's most precious gifts to humankind. They are the foundation of a marine ecosystem that has sustained populations across the globe for millennia. Millions of people make their living from the oceans; they help local and national economies thrive, feed a hungry planet, allow for the international trade and transport of goods, and are the lifeblood of coastal communities. That's why I have a strong mandate to support a vibrant and growing fish and seafood industry in Canada.

It is against this backdrop that I am pleased to present Fisheries and Oceans Canada's (DFO) Departmental Plan, which offers a detailed perspective on our ambitions to grow Canada's blue economy in ways that protect, regenerate, and restore our coastal habitats and fish stocks.



Like many maritime nations, Canada faces unprecedented challenges and opportunities in its marine environment. Climate change and unsustainable practices are contributing to warming oceans and acidification, habitat degradation, and declining species. The good news is that our oceans can be a major part of the climate solution and a source of sustainable economic prosperity if we transform the way they are managed. To do this, we must prioritize long-term success over short-term expediency and recognize that environmental quality and economic growth are not competing values, but rather wholly dependent on one another.

Science is fundamental to informing the actions we take to ensure our fisheries remain sustainable and healthy. Equally important, oceans produce over half of the world's oxygen and absorb 50 times more carbon dioxide than our atmosphere. They also regulate our climate and weather patterns. DFO is making significant strides to manage the long-term health of our oceans and aquatic resources through unprecedented investments in marine protected areas, changes to the *Fisheries Act* and its regulations, and a generational investment to protect and restore Pacific salmon. However, if we are to confront mounting environmental pressures and grow a sustainable blue economy, the Department must transform both what it does and how it does it. To help guide this transformation, we are focusing on four key priority areas: habitat restoration and marine protection; species protection; climate change; and a sustainable blue economy.

As you will see in this Departmental Plan, we are taking concrete actions in 2022-23 and beyond, that are closely aligned with my mandate letter from Prime Minister Trudeau. We will:

- implement the modernized *Fisheries Act* to protect fish and fish habitats and ensure our fisheries can continue to grow Canada's economy and sustain coastal communities
- grow Canada's ocean and freshwater economy; support the long-term sustainable growth of our fish and seafood sector; ensure that we are positioned to succeed in the global ocean sectors; and advance reconciliation, conservation, and climate objectives through the development of a Blue Economy Strategy
- work with Indigenous partners to better integrate traditional knowledge into planning and policy decisions, and advance consistent, sustainable, and collaborative fisheries arrangements

- work with partners to implement the Pacific Salmon Strategy Initiative; make new investments and develop a conservation strategy to restore and rebuild wild Atlantic salmon populations and their habitats; work with the province of British Columbia and Indigenous communities on a responsible plan to transition from open net-pen salmon farming in coastal British Columbia waters by 2025; and work to introduce Canada's first-ever *Aquaculture Act*
- work to halt and reverse nature loss by 2030 in Canada and achieve full recovery by 2050, ensuring that we meet our goals to conserve 25 per cent of Canada's lands and waters by 2025, and 30 per cent of each by 2030
- protect and restore our oceans and coasts by renewing and expanding the Coastal Restoration Fund, expanding the Ghost Gear Program, supporting community shoreline and oceans plastic cleanup efforts, and launching the next phase of the Oceans Protection Plan while strengthening marine research and science
- leverage advanced surveillance technologies, like Dark Vessel Detection, to continue taking action on illegal, unregulated, and unreported fishing to ensure sustainable fisheries
- continue to renew the Canadian Coast Guard (CCG) fleet and advance the shipbuilding industry, including the process to add a third Canadian shipyard as a strategic partner to the National Shipbuilding Strategy

In a year that marks the 60<sup>th</sup> anniversary of CCG, renewing our aging fleet continues to be a departmental priority. CCG personnel require state-of-the-art tools, equipment and vessels in order to: save lives; protect the environment; keep our waters safe, secure, and open; support an evolving Arctic; and, help our economy grow by facilitating marine commerce from and to ports. Investing in CCG ensures this iconic organization can continue carrying out the essential duties that Canadians depend on from coast to coast to coast. Fleet renewal helps revitalize Canada's shipbuilding and marine industries; creates new opportunities for workers and businesses; and, fuels competition, innovation, and skills development across the country.

As this Departmental Plan makes clear, Canada's oceans are the foundation of our country's promising future. I invite all Canadians to learn more about how DFO, through regulatory improvements, judicious use of data to inform decisions, and cooperation with its partners, will work to protect, restore, and regenerate our oceans and aquatic resources while continuing to drive economic prosperity and advance reconciliation.

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The Honourable Joyce Murray, P.C., M.P.  
Minister of Fisheries, Oceans and the Canadian Coast Guard

## Plans at a glance

DFO is the lead federal department on a wide range of activities that ensure the conservation, protection, and regeneration of Canada's fisheries and aquatic ecosystems. In doing so, DFO works with fish harvesters, coastal and Indigenous communities, and provincial and territorial partners to enable participation in the fisheries and continued prosperity from fish and seafood. DFO and its special operating agency, CCG, also play key roles in keeping Canadian waters safe and secure by responding to maritime incidents such as search-and-rescue and environmental emergencies, and by maintaining waterways year-round so they are safely navigable by mariners and all Canadians.

Over the coming year, the following highlights are key initiatives the Department will advance in support of Government of Canada priorities and the Minister's mandate commitments.

### Fisheries

To support sustainable fishing opportunities for all those who depend on the resource, DFO will continue to advance work that supports the conservation, protection, and regeneration of the marine environment and the lifeforms it sustains (including by consideration of the application of a precautionary approach and an ecosystem approach to decisions). To support this objective, DFO is focused on the continued implementation of the modernized *Fisheries Act*, which restores lost protections, rebuilds fish populations, and incorporates modern safeguards so that fish and fish habitats are protected for future generations.

DFO will continue to advance work to implement the Fish Stocks provisions under the *Fisheries Act* by finalizing a regulation to launch the provisions and prescribe the first batch of stocks to be subject to the provisions. The Fish Stocks provisions will strengthen DFO's fishery management framework by setting out binding obligations to maintain fish stocks at levels necessary to promote their sustainability, and to develop and implement rebuilding plans to increase the abundance of stocks that have become depleted. Supported by the best available scientific advice on the health of fish stocks and ecosystems, implementing the provisions and regulation will strengthen Canada's ability to promote more abundant fish stocks and more sustainable and prosperous fisheries for current and future generations.

Working in close collaboration with provincial and territorial authorities, Indigenous partners, fishing and stewardship organizations, and implicated communities, DFO will advance work to implement the Pacific Salmon Strategy Initiative as well as to develop a conservation strategy to restore and rebuild wild Atlantic salmon populations and their habitats. Together, these efforts will focus on protecting and rebuilding salmon populations on both coasts, as salmon are some of the most iconic fish species in Canada, with social, cultural, and economic significance for many communities.

DFO recognizes that Canada can be a global leader in sustainable aquaculture when working in collaboration with Indigenous peoples, industry, local communities, and local governments. To this end, DFO will work with the province of British Columbia and Indigenous communities on a responsible plan to transition from open-net pen salmon farming in coastal British Columbia waters by 2025 and work to introduce Canada's first-ever *Aquaculture Act*.



### **Aquatic ecosystems**

Consistent with the Government of Canada's commitment to the conservation and protection of our marine ecosystems, the Department will continue to work with Environment and Climate Change Canada and Parks Canada to advance work to conserve 25 per cent of our oceans by 2025 and 30 per cent by 2030, and to champion this goal internationally. As a key component of this strategy, the Department will implement new protection standards for federal marine protected areas and other effective area-based conservation measures, including marine refuges, to help to protect and restore marine biodiversity.

DFO is focused on protecting and restoring oceans and coasts through a range of activities. Looking ahead, the Department will expand aquatic habitat restoration activities and other clean-up efforts, such as those by fish harvesters and others to clean up lost and abandoned fishing gear and ocean plastics. Working with partners, DFO will also help to launch the next phase of the Oceans Protection Plan, helping to deliver world-leading marine safety systems, increasing protection for marine species and ecosystems, and creating stronger partnerships with Indigenous and other coastal communities.

### **Marine navigation, operations, and response**

The CCG fleet is critical to support marine safety, maintain commercial shipping routes, protect Canada's waters, coasts, and coastal communities from marine pollution and environmental disasters, support essential community resupply in the North, assert Canada's sovereignty, and to support scientific exploration. Given the need for state-of-the-art, modern ships for CCG, efforts will continue to advance the renewal of the CCG fleet. This will, in turn, support the revitalization of the Canadian shipbuilding industry.

Working in close collaboration with other federal departments, DFO and CCG will work to ensure Canada continues to be prepared to proactively mitigate, and respond to, emerging incidents and hazards. These efforts will be supported by the next phase of the Oceans Protection Plan, which aims to deliver world-leading marine safety systems in Canada.

### **Reconciliation**

The Department has a key role in the transformation of Canada's relationship with Inuit, First Nations, and Métis peoples, and is committed to using a distinctions-based approach to advancing new ways to meaningfully collaborate with and support the participation of Inuit, Métis, and First Nations governments, communities, and organizations in fisheries, oceans, and marine activities. This includes ongoing implementation of the Department's Reconciliation Strategy, working with Indigenous partners to forge innovative and mutually-beneficial partnerships, better integrate Indigenous knowledge into planning and policy decisions, and taking steps to further implement the *United Nations Declaration of the Rights of Indigenous Peoples Act (2021)*.

In line with the Government's commitment to build renewed nation-to-nation, Inuit-Crown, and government-to-government relationships with First Nations, Inuit, and Métis peoples, the Department will continue with the implementation of the [Action Plan for the Renewal and Expansion of DFO's Indigenous Programs](#)<sup>1</sup>. The Department will continue to work alongside Indigenous partners through a co-development, co-design, and co-delivery approach to improve these programs, including bringing them into greater alignment with the needs and interests of Indigenous governments, organizations, and communities.



As CCG celebrates its 60th anniversary in 2022, its vision, as it navigates the future, is to support self-determination, improve service delivery, and advance reconciliation with Indigenous Peoples in matters related to CCG's mandate of ensuring safe and accessible waterways in Canada and the sustainable use and development of Canada's oceans and waterways, in a manner that fosters and maintains positive relationships. Canada has made robust commitments to renew its relationship with Indigenous peoples and to advance reconciliation, based on the recognition of rights, respect, co-operation and partnership. CCG works to fulfil these commitments in a number of ways, including through interest-based negotiations and supporting rights-based negotiations led by Crown-Indigenous Relations and Northern Affairs.

For more information on DFO's plans, priorities, and planned results, see the [Core Responsibilities: Planned Results and Resources, and Key Risks](#) section of this plan.



## Core responsibilities: planned results and resources, and key risks

This section contains information on the Department's planned results and resources for each of its core responsibilities. It also contains information on key risks related to achieving those results.

### Fisheries

#### Description

Manage Canada's fisheries, Indigenous fisheries programs, aquaculture activities, and support commercial fishing harbours while applying relevant legislation.



#### Planning highlights

The Fisheries core responsibility is focused on advancing the following Departmental Results:

- Canadian fisheries are sustainably managed
- Canadian aquaculture is sustainably managed
- the commercial fishing industry has access to safe harbours
- fisheries, oceans and other aquatic ecosystems are protected from unlawful exploitation and interference
- scientific information on fisheries resources is available to inform management decisions
- enhanced relationships with, involvement of, and outcomes for Indigenous people

The indicators used to measure progress towards these results appear in the [Planned results for Fisheries](#) table beginning on page 16.

Key priorities for 2022-23 and beyond include the following commitments from the [Minister's mandate letter](#)<sup>ii</sup>:

- work to support sustainable, stable, prosperous fisheries through the continued implementation of the modernized *Fisheries Act*, which restores lost protections, rebuilds fish populations, and incorporates modern safeguards so that fish and fish habitats are protected for future generations and Canada's fisheries can continue to grow the economy and sustain coastal communities
- continue working with business, academic institutions, non-profits, provincial and territorial governments, and Indigenous partners to grow Canada's ocean and freshwater economy and support the long-term sustainable growth of Canada's fish and seafood sector, ensuring Canada is positioned to succeed in the fast-growing global ocean sectors of the blue economy and advancing reconciliation, conservation and climate objectives
- work in close collaboration with provincial and territorial authorities, Indigenous partners, fishing and stewardship organizations and implicated communities to implement the Pacific Salmon Strategy

#### DID YOU KNOW?



The World Bank defines the blue economy as "the sustainable use of ocean resources for economic growth, improved livelihoods and jobs, and ocean ecosystem health."

- make new investments and develop a conservation strategy to restore and rebuild wild Atlantic salmon populations and their habitats
- expand the Ghost Gear Program to continue efforts by fishers and others to retrieve and address abandoned, lost, or otherwise discarded fishing gear and ocean plastics
- work with Indigenous partners to better integrate traditional knowledge into planning and policy decisions
- advance consistent, sustainable, and collaborative fisheries arrangements with Indigenous and non-Indigenous fish harvesters
- continue to work with the province of British Columbia and Indigenous communities on a responsible plan to transition from open net-pen salmon farming in coastal British Columbia waters by 2025 and work to introduce Canada's first-ever *Aquaculture Act*
- continue to support improvement in small craft harbours and work to ensure our investments in harbours are resulting in climate-resilient infrastructure that serves the needs of the fishing industry and local residents

More information on the Department's plans to achieve these results and deliver on these commitments can be found below.

DFO works to support healthy and sustainable fishing and aquaculture sectors. Programs in the Fisheries core responsibility ensure that fisheries and the seafood industry are well-managed, that the rights of Indigenous peoples are respected and Indigenous interests are supported, that safe commercial harbours support the industry, and that fish are harvested and farmed in a safe, orderly, and sustainable manner.

#### **Blue Economy Strategy**

The Department is leading the development of a comprehensive Blue Economy Strategy ("the Strategy") that will set out the Government's vision for Canada's ocean space. The Strategy will seek to grow Canada's ocean and freshwater economy, and support the long-term sustainable growth of Canada's fish and seafood sector, ensuring Canada is positioned to succeed in the fast-growing global ocean sectors of the blue economy and advancing reconciliation, conservation, and climate objectives. To this end, DFO has hosted a series of roundtables with key ocean sector stakeholders and invited public comments on the [Blue Economy Strategy Engagement Paper](#)<sup>iii</sup>.

In 2022-23, the Department will publish the Strategy, which will establish a clear framework to guide future actions and investments, and will launch the implementation of the Government's long-term vision to sustainably develop and grow the blue economy. Moreover, these efforts will continue to be guided by Canada's commitment to advance the work of the High Level Panel for a Sustainable Ocean Economy (HLP), a group of 14 heads of state and governments that work to promote the three pillars of protection, production, and prosperity in pursuit of a sustainable ocean economy.

#### **Sustainable fisheries**

In working to support sustainable, long-term fisheries, DFO will continue to consider the application of a precautionary approach and an ecosystem approach to decisions. In 2022-23, DFO will aim to implement the Fish Stocks provisions (section 6.1 and 6.2) of the amended *Fisheries Act* by regulation, and have those provisions apply to a prescribed set of stocks. Once in effect, the Fish Stocks provisions will require that stocks prescribed by regulation be maintained at sustainable levels and, if a stock becomes depleted, that a plan is implemented to rebuild the stock.

Pacific salmon are socially, culturally, and economically important to many communities and a critical part of many ecosystems, but their populations have been declining due to a combination of climate, habitat, and harvesting pressures. In 2021, the Government of Canada launched the [Pacific Salmon Strategy Initiative<sup>iv</sup>](#) (PSSI), its largest-ever investment to respond to Pacific salmon declines and work to stabilize, protect, and rebuild prioritized salmon stocks. The PSSI will focus on four key areas: conservation and stewardship; salmon enhancement; harvest transformation; and integration and collaboration. This will include work to modernize and transform salmon harvest management, including continued engagement with First Nations and harvesters on the future of commercial and recreational fisheries, and the Pacific Salmon Commercial License Retirement Program. In 2022-23, through the Salmonid Enhancement Program, salmon enhancement will support both conservation and rebuilding of key salmon populations and sustainable fisheries. The Department will work strategically with First Nations and stakeholders on plans to build new DFO hatchery facilities in critical areas, and retrofitting existing facilities in targeted areas to support PSSI. For more information on the PSSI, please see the [Aquatic ecosystems](#) core responsibility below.

DFO programming supports innovation, sustainability, and the ability to meet the growing demands of a worldwide market in the fish and seafood sector through the delivery of three specific, cost-shared funds: the Atlantic Fisheries Fund; the British Columbia Salmon Restoration and Innovation Fund; and, the Quebec Fisheries Fund. As part of its work in 2022-23, DFO will continue to support projects that drive innovation through modernized approaches and technologies to ensure the fish and seafood sector is resilient to the impacts of changing economic and environmental conditions, including climate change. The Department will also engage with key partners (including provinces and territories, Indigenous communities, industry, and regional stakeholders) to ensure that the program continues to remain relevant to the evolving needs of the Canadian fish and seafood sector. These three funds will continue to help ensure that the fish and seafood sector in Canada is positioned for long-term environmental and economic sustainability.

The [Whales Initiative<sup>v</sup>](#) includes the Department's many activities to understand and manage whales in Canadian waters. This initiative focuses on three endangered species and populations – Southern Resident killer whales (SRKW) in British Columbia; St. Lawrence Estuary Belugas (SLEB) in Quebec; and, North Atlantic right whales (NARW) in Atlantic Canada – but is designed to provide benefits across whale species.

In 2022-23, the Department will complete the implementation of all mandatory and voluntary fisheries mitigation measures, as well as any additional measures that are deemed to be necessary, specifically:

- the use of planes, ships, and underwater listening devices to find out where and when NARW are in Canadian waters
- the establishment of areas closed to fishing when NARW are seen or heard in the Gulf of St. Lawrence, Bay of Fundy, and other areas in Quebec and Atlantic Canada
- a requirement for fisheries in Atlantic Canada and Quebec, such as lobster and crab, to have colour marks on their rope to help determine whether gear involved in whale entanglements comes from Canada or the United States

As well as providing economic benefits through tourism and other activities, wild whale species have important intrinsic and cultural value, such as whale harvesting for food, social, and ceremonial purposes. For more information on the Department's work to protect these iconic species, please see the [Aquatic Ecosystems](#) core responsibility below.

Ghost gear (abandoned, lost, or otherwise discarded fishing gear, such as nets, traps and pots, ropes, and floats) is a form of marine pollution that often poses a navigational hazard; can be fatal to fish, marine mammals, and other marine life; threatens fish stocks and global food security; and, also breaks down into other forms of pollution such as microplastics. DFO is committed to showing leadership in the prevention, mitigation, recovery, and management of ghost gear. An important part of the Department's work in this area has been the implementation of the [Sustainable Fisheries Solutions and Retrieval Support Contributions Program](#)<sup>vi</sup> (or Ghost Gear Fund), which assists Indigenous groups, fish harvesters, the aquaculture industry, not-for-profit organizations, and communities to take concrete actions by supporting third-party led retrieval actions, fish harvesters' acquisition of new technologies that reduce gear loss and improve gear retrieval actions, international leadership, and the responsible disposal and recycling of ghost gear. In 2022-23, the Department will work to support the Minister's mandate letter commitment to expand the Ghost Gear Program to continue these efforts and further develop a world-class program focused on long-term prevention of ghost gear. In preparation, DFO is analyzing data from the new Fishing Gear Reporting System to better understand the extent of gear loss in Canada and is also identifying areas in Canada's northern communities for future ghost gear removal and potential recycling and disposal capacity development. This work will help conserve and restore our marine environment to benefit marine life, food security, and coastal communities.

DFO's fishery officers will continue to work with partners to promote compliance with legislation, regulations, and management measures for the conservation and sustainable use of aquatic resources. The Department uses intelligence and strategic assessments to support and direct enforcement efforts to the highest risk areas and target large-scale threats to Canada's fisheries and aquatic ecosystems. Activities in 2022-23 to support this intelligence-led approach will include the completion of DFO's ambitious and innovative Open Source Information Collection (OSIC) program. The OSIC program enables the development of actionable intelligence products, including real-time operational support to fishery officers, from the collection of online (or open source) information where it pertains to DFO's law enforcement mandate. These efforts help ensure that fisheries, oceans, and other aquatic ecosystems in Canada are protected from unlawful exploitation and interference. Internationally, DFO will continue to advance policies that contribute to: sustainable fisheries; promote restoration of fish stocks; and proactively work to eliminate illegal, unreported, and unregulated (IUU) fishing. This will include working bilaterally and with multilateral bodies, such as the United Nations Food and Agriculture Organization and the many regional fisheries management organizations that manage most of the transboundary and high seas fisheries in which Canada participates. DFO will work with all of these organizations to advance fisheries policies that use a precautionary approach and an ecosystem approach to control harvest levels based on scientific assessments. The Department is also working to eliminate harmful fisheries subsidies (which contribute to overcapacity and overfishing) through ongoing negotiations at the World Trade Organization. In 2022-23, DFO will combat IUU fishing by deploying its fisheries patrol aircraft and fishery officers to high risk regions and by expanding partnerships and coverage of its satellite-based Dark Vessel Detection platform, which remotely identifies and tracks vessels whose location transmitting devices have been switched off. This will allow the Department to better support international patrol operations. Combatting IUU fishing supports the [Charlevoix blueprint for healthy oceans, seas and resilient coastal communities](#)<sup>vii</sup>, as well as the High Level Panel for a Sustainable Ocean Economy Transformations for a Sustainable Ocean Economy framework and the 2021 [Speech from the Throne's](#)<sup>viii</sup> priority of fighting for a secure, just, and equitable world. Because many species straddle borders or migrate, this international work will also help ensure the sustainability of fish stocks in Canada.

### Sustainable aquaculture

Aquaculture is important to food security in Canada and delivers significant economic and social benefits, including well-paying, full-time jobs in rural and coastal communities. DFO manages aquaculture activities to contribute to an environmentally, economically, and socially sustainable Canadian aquaculture sector. Aquaculture science and new technologies play key roles in DFO's work. For more information on targeted and collaborative research and development, peer-reviewed processes, technologies, and species research, please see [Fisheries and Ocean's website](#)<sup>ix</sup>.

DFO will work with the province of British Columbia and Indigenous communities on a responsible plan to transition from open net-pen salmon farming in coastal British Columbia waters by 2025. As part of this work, DFO will engage with partners and stakeholders to ensure the plan is environmentally responsible, economically feasible, and takes into account social considerations. In parallel, the Department is continuing to work to introduce Canada's first-ever *Aquaculture Act* to support the continuous improvement of aquaculture management in Canada.

In 2020-21, DFO conducted an [Evaluation of the Fisheries and Aquaculture Clean Technology Adoption Program](#)<sup>x</sup> (FACTAP). FACTAP funds projects to support Canada's fisheries and aquaculture industries in adopting clean technologies for fish and seafood farming while improving environmental performance and competitiveness. The evaluation found that the program performed well, but recommended strengthening its contribution through a more strategic approach to funding, expansion of eligible activities, and increased marketing and promotion of FACTAP.

In response to the evaluation, FACTAP expanded the range of activities eligible for contribution support to include specific portions of the Innovation Spectrum, including research and development and pilots/demonstrations for aquaculture projects.

To address the evaluation findings, in 2021-22, DFO:

- collaborated and consulted with Canada's fisheries, aquaculture and fish processing sectors to target priority environmental issues
- developed guidance material for program coordinators and prospective applicants outlining priority environmental issues
- targeted meetings with industry associations to promote development of proposals aimed at addressing mutually identified priority environmental issues

In 2022-23, the Department will continue to follow the path set out with these approaches to ensure that the program maximizes outcomes from funding spent. Also in 2022-23, the Department will continue efforts to increase awareness of federal funding available to support the adoption of clean technologies by Canada's fisheries aquaculture and fish processing sectors. This will include direct outreach and strengthened collaboration with industry associations as well as the use of the program's website and other online platforms (e.g. social media, emails).



### Reconciliation with Indigenous peoples

DFO will continue to implement the [Action Plan for the Renewal and Expansion of DFO's Indigenous Programs](#)<sup>xi</sup> through ongoing co-development, co-design, and co-delivery with Indigenous organizations and communities. The Action Plan outlines the Department's multi-year plan to respond to the recommendations of the Indigenous Program Review (a collaboration with the National Indigenous Fisheries Institute) to strengthen DFO's commercial and collaborative Indigenous programs and bring them into greater alignment with Indigenous organizations' and communities' definitions of success. The Action Plan also highlights cross-cutting recommendations to influence implementation of the DFO-Coast Guard Reconciliation Strategy. (For more on this Strategy, please see the [Internal Services](#) section below.) The goal of this work is to support long-term capacity development, including employment, within Indigenous communities and organizations through participation in commercial fisheries and the management of aquatic resources and ecosystems. In 2022-23, DFO will continue its efforts on this front by working with Indigenous experts to coordinate more focused investment in community-based technical capacity and participation in fisheries monitoring and fieldwork. The goal is to increase access to appropriate training, expand the number of technicians and monitors deployed in the field, and strengthen collaboration through existing program relationships.

The Department will also continue to negotiate and implement reconciliation agreements and treaties with Indigenous communities in order to further the recognition and implementation of Indigenous rights and put in place collaborative management and governance processes.

As part of its 2022-23 work to ensure that aquaculture is sustainably managed, DFO will provide funding to increase the involvement of Indigenous peoples in monitoring the health of ecosystems. The monitoring will include sampling and data collection to assess potential impacts of aquaculture activities. This will provide more data to inform decision-making and enhance the involvement of Indigenous peoples in the management of aquaculture.

In 2020-21, DFO conducted an [Evaluation of the Indigenous Commercial Fisheries Programs](#)<sup>xii</sup>, which focus on building capacity in Indigenous communities to support meaningful involvement in the commercial fishing sector. The evaluation included an assessment of the collaborative approaches (co-design, co-development, and co-delivery) used to deliver the programs. The evaluation found that the programs demonstrate flexibility and responsiveness to diverse and changing needs, are viewed as important contributors to both the Government's reconciliation agenda and DFO's responsibility to sustainably manage fisheries, and have objectives that are well aligned with key needs expressed by Indigenous communities and the priorities of DFO and the broader federal government. It also found that while many needs are being met, there is an ongoing need for funding to support increased access to commercial licences and quota so that Indigenous commercial fishing enterprises can continue to grow.

In 2022-23, DFO will improve the programs by continuing to implement the evaluation's findings and recommendations, including clarifying eligibility criteria for the training funded by the programs, updating the process used to monitor and report on program performance (e.g., milestones and performance indicators), and continuing to implement the Indigenous Program Review action plan.

British Columbia Salmon Restoration and Innovation Fund (BCSRIF) policies and processes have been developed to reflect the unique role of Indigenous peoples as stewards of fishery resources. For example, to ensure that the contributions of Indigenous knowledge are acknowledged and respected, the BCSRIF contribution agreement was recently updated to ensure that consent is obtained prior to the provision or use of any Indigenous knowledge in relation to a BCSRIF project and that the funder and all project recipients are informed as to the allowable access to, or use of, the knowledge provided.

DFO will continue to implement the international Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean; which entered into force June 2021. This includes Canada's contribution towards filling the knowledge gaps pertaining to the central Arctic Ocean's ecosystem and marine resources, as part of the Joint Program of Scientific Research and Monitoring, ongoing engagement with northern Indigenous organizations (e.g., Inuit Circumpolar Council – Canada), championing the meaningful participation of Indigenous knowledge holders throughout the implementation of the Agreement, and supporting the creation of a Central Arctic Ocean science and Indigenous knowledge secretariat to coordinate the emerging science program. The Parties to the Agreement are tentatively scheduled to meet later in 2022 to continue the work towards implementing the Agreement.

### **Small craft harbours**

DFO operates and maintains a national network of harbours that are critical to success of the commercial fishing industry. To ensure these harbours remain safe, accessible, and in good repair, the Department cooperates on repair and restoration projects with local Harbour Authorities, which manage and operate facilities on behalf of DFO. Although the main focus is on the evolving needs of the commercial fishing industry, these harbours also support businesses involved in many other aspects of the blue economy, including fish processing, transportation, commercial recreational operations, aquaculture, and tourism.

Through Budget 2021, DFO is investing \$300 million over two years to repair, renew, and replace small craft harbours. In 2022-23, this represents over 180 projects that will be undertaken throughout the country. These efforts support Canadians in a broad number of industries and strengthen the resilience of rural and coastal communities.

As part of establishing a new Tallurutiup Imanga National Marine Conservation Area in the High Arctic, the Government of Canada, the Government of Nunavut, and the Qikiqtani Inuit Association (QIA) [announced in August 2019](#)<sup>xiii</sup> that new harbours would be constructed in Nunavut. Construction on two new harbours, in Clyde River and Arctic Bay, will begin in 2022-23 and is expected to be completed by 2025-26. New harbour facilities in these communities will provide safe access to the land and sea, and address a lack of infrastructure that has hampered local economic development. These harbours will improve the safety and security of existing and emerging fisheries, and may spur the development of additional fisheries in the area.

Several projects in 2022-23 will add climate-resilient infrastructure to small craft harbours, including at Shag Harbour in Nova Scotia, Petit-Cap in New Brunswick, and Cowichan Bay and Prince Rupert (Rushbrook) in British Columbia. These projects will repair, reinforce, and add infrastructure that will be better able to resist and withstand the effects of storms, strong winds, and waves on both coasts. DFO uses the [Canadian Extreme Water Level Adaptation Tool](#)<sup>xiv</sup> to address the forecasted rise in sea-levels when designing marine infrastructure, as well as coastal engineering expertise to model the coastal conditions to ensure designs are resilient to the local conditions. For example, although circumstances vary based on individual site characteristics, the finished surfaces of most new marine infrastructure, such as wharves and breakwaters, are now built to an elevation that is at least 0.3 m higher due to rising sea levels. Additionally, breakwater infrastructure is now designed to be significantly more robust than in previous years. Increased use of sediment transportation studies and technology (drones, hydrographic surveys, LiDAR) will be used to minimize sediment interference in navigable channels improving ease of access to small craft harbours.

### Gender-based analysis plus



The Department will implement guidance to more consistently and effectively integrate GBA Plus considerations into its programs' tracking and reporting of the results they achieve for Canadians. This will guide the systematic review and consideration of how best to measure the outcomes and impacts of programs on different and intersecting identity groups. The ensuing enhanced understanding of the results the Department achieves for different and intersecting identity groups will ultimately lead to better outcomes for Canadians of all identities.

The [2020 Global Ocean Science Report](#)<sup>xv</sup> revealed that women in ocean science continue to be underrepresented, with women representing about 7 to 72 per cent of all ocean science personnel (i.e., researchers, technicians, and supporting staff) depending on the country, with the global average at 37 per cent. As part of its efforts to advance gender equity, DFO is providing financial support for projects such as a collaborative project with Ingenium (the Canada Agriculture and Food Museum, the Canada Aviation and Space Museum, and the Canada Science and Technology Museum), and the Canadian Commission for UNESCO that aim to promote the next generation of female and non-binary ocean leaders through the preparation and dissemination of various educational resources regarding gender equity in ocean science.

### United Nations' (UN) 2030 Agenda for Sustainable Development and the UN Sustainable Development Goals

For additional information on how the Department is advancing the UN Sustainable Development Goals, please refer to DFO's [2020-2023 Departmental Sustainable Development Strategy](#)<sup>xvi</sup>.

### Experimentation



Innovation is one of the program pillars of the Fish and Seafood Sector Program; the program's investments are intended to encourage regional fisheries stakeholders to pilot innovative solutions to the challenges faced by the sector. By mitigating the initial financial risk, the program enables participants to research, develop, and pilot new techniques, technologies, and processes that will help to modernize fisheries. For example, in 2022-23, projects funded by DFO will explore selective fishing practices (which aim to minimize the impact of fishing on non-target species) and better ways to identify whether immobile lobsters should be automatically culled and discarded as waste.

DFO continues to explore innovative approaches to leveraging the vast amounts of data collected by the Department to support decision-making while improving the quality of results, realizing efficiencies, and reducing costs. For example, in 2022-23, DFO will enhance successful techniques used in detecting vessels' fishing behavior, and apply this capability to new pilots in response to management questions related to compliance monitoring and other needs.


Novel genomic sequencing technologies will allow the analysis of stock (i.e., population) structure in commercially important marine species. These experiments will quantify genetic diversity throughout Atlantic Canada, connectivity among identified stocks, and aim to address questions related to what stocks are present, how stocks are adapted to their environments, and model how stocks may respond to climate change in the coming years.

### **Key risk(s)**

Work under this Core Responsibility touches on many areas of expertise within DFO. As a result, numerous risks influence the plans and priorities in this area. For example, there is an ongoing risk that the Department may not be able to build collaborative relationships with Indigenous communities at a sufficient pace to meet expectations. In response, DFO has developed plans that aim to mitigate these risks. For instance, the Department will continue to strengthen communication with Indigenous partners, including by establishing joint committees to help ensure strong and on-going dialogue. In addition, the Department will continue to work towards streamlining and better coordinating its approach to engagement with its various Indigenous partners. DFO will also continue to monitor these risks and will adjust its strategy in response to any changes in the level of risks.

## Planned results for Fisheries

The following table shows, for Fisheries, the planned results, the result indicators, the targets and the target dates for 2022-23, and the actual results for the three most recent fiscal years for which actual results are available.

	Departmental result	Departmental result indicator	Target	Actual results
Canadian fisheries are sustainably managed		Percentage of major fisheries that have limit reference points and harvest control rules	At least 50% by March 31, 2023	2018-19: 40% 2019-20: 46% <sup>1</sup> 2020-21: 48% <sup>2</sup>
		Percentage of decisions for major fisheries where harvest control rules were followed	Exactly 100% by March 31, 2023	2018-19: 100% 2019-20: 100% 2020-21: 98% <sup>3</sup>
		Percentage of major stocks in the cautious and healthy zone	At least 55% by March 31, 2023	2018-19: 49% 2019-20: 48% <sup>4</sup> 2020-21: 46% <sup>5</sup>
Canadian aquaculture is sustainably managed		Percentage of aquaculture farms that are compliant with the <i>Fisheries Act</i> regulations	At least 90% by March 31, 2023	2018-19: 99% 2019-20: 99% 2020-21: 95%
		Level of Canadian aquaculture production	At least 170,000 tonnes by December 31, 2022	2018-19: 191,416 tonnes 2019-20: 191,259 tonnes 2020-21: 187,026 tonnes
The commercial fishing industry has access to safe harbours <sup>6</sup>		Percentage of core harbours that are in fair or better condition	At least 87% by March 31, 2023	2018-19: 89% 2019-20: 92% 2020-21: 91%
Fisheries, oceans and other aquatic ecosystems are protected from unlawful exploitation and interference		Percentage of inspection activities that have resulted in compliance actions	At most 60% by March 31, 2023	2018-19: N/A 2019-20: N/A 2020-21: N/A
Scientific information on fisheries resources is available to inform management decisions		Percentage of scheduled fisheries science advisory processes that were completed	At least 90% by March 31, 2023	2018-19: 100% 2019-20: 75% <sup>7</sup> 2020-21: 79% <sup>8</sup>
		Percentage of sustainable aquaculture research projects which provide information and/or advice to policy and decision-makers	Exactly 100% by March 31, 2023	2018-19: 100% 2019-20: 96% 2020-21: 92%

<sup>1</sup> Despite a large number of stocks being added and having a default status of "uncertain," DFO's performance has improved, indicating an upward trend in the development of Limit Reference Points and Harvest Control Rules, and a stabilization in the number of major stocks.

<sup>2</sup> The 2020-21 result is higher than previous years due to a combination of a stabilization of the number of stocks in the survey and progress in the development of harvest control rules and limit reference points.

<sup>3</sup> For 2020-21, the Department used a two-year average to set the total allowable catches in two areas. This was to account for fluctuations in the total allowable catches for the fishery but was not in line with the harvest control rule. The harvest control rule will be followed for 2021-22.


<sup>4</sup> Due to a large number of stocks being added and having a default status of "uncertain," the percentage of stocks in the cautious and healthy zone has declined. DFO continues the work needed to identify reference points for all the stocks in the survey.

<sup>5</sup> Due to a large number of stocks being added and having a default status of "uncertain," the percentage of stocks in the cautious and healthy zone has declined. DFO continues the work needed to identify reference points for all the stocks in the survey.

<sup>6</sup> The Small Craft Harbour indicator is currently under review and in particular the calculation method for generating results. Any adjustments to this are expected to have an effect on future results and baselines.

<sup>7</sup> Some of the planned advisory processes were deferred due to COVID-19 challenges and restrictions, science capacity issues, and, in some cases, at the request of the client.

<sup>8</sup> Some of the planned advisory processes were deferred due to COVID-19 restrictions and other challenges or were withdrawn.


	Departmental result	Departmental result indicator	Target	Actual results
	Enhanced relationships with, involvement of, and outcomes for Indigenous people	Number of agreements / arrangements involving Indigenous groups	At least 452 by March 31, 2023	2018-19: N/A 2019-20: N/A 2020-21: 388
		Number of Indigenous people trained through agreements / arrangements*	At least 546 by March 31, 2023	2018-19: N/A 2019-20: N/A 2020-21: 639
		Number of Indigenous people employed through agreements/ arrangements*	At least 4,982 by March 31, 2023	2018-19: N/A 2019-20: N/A 2020-21: 4,727

Note: N/A in the "Actual results" column indicates that the performance indicator was not in effect at that time, and therefore, historical data may not be available. In cases where historical data is available, past results are presented.

\*These targets also includes people employed/trained under Indigenous-led activities funded by agreements if the program cannot validate individuals' Indigenous status.


### Planned budgetary spending for Fisheries

The following table shows, for Fisheries, budgetary spending for 2022-23, as well as planned spending for that year and for each of the next two fiscal years.

	2022-23 budgetary spending (as indicated in Main Estimates)	2022-23 planned spending	2023-24 planned spending	2024-25 planned spending
	1,276,607,880	1,276,607,880	1,013,209,416	865,365,474

### Planned human resources for Fisheries

The following table shows, in full-time equivalents, the human resources the Department will need to fulfill this core responsibility for 2022-23 and for each of the next two fiscal years.

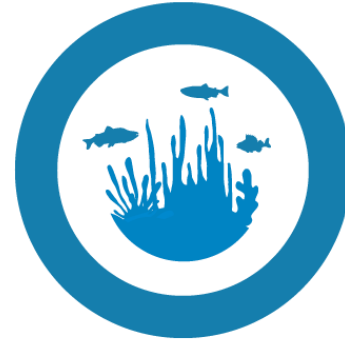
	2022-23 planned full-time equivalents	2023-24 planned full-time equivalents	2024-25 planned full-time equivalents
	3,644	3,612	3,562

The financial, human resources and performance information for the Department of Fisheries and Oceans' Program Inventory is available on [GC InfoBase](#)<sup>xvii</sup>.

# Aquatic ecosystems

## Description

Conserve and protect Canada's oceans and other aquatic ecosystems and species from human impact and invasive species.



## Planning highlights

The Aquatic Ecosystems core responsibility is focused on advancing the following Departmental Results:

- negative impacts on Canada's oceans and other aquatic ecosystems are minimized or avoided
- scientific information on Canada's oceans and other aquatic ecosystems is available to inform management decisions
- enhanced relationships with, involvement of, and outcomes for Indigenous people

The indicators used to measure progress towards these results appear in the [Planned Results](#) table beginning on page 27.

Key priorities for 2022-23 and beyond include the following commitments from the [Minister's mandate letter](#)<sup>xviii</sup>:

- work to support sustainable, stable, prosperous fisheries through the continued implementation of the modernized *Fisheries Act*, which restores lost protections, rebuilds fish populations and incorporates modern safeguards so that fish and fish habitats are protected for future generations and Canada's fisheries can continue to grow the economy and sustain coastal communities
- work in close collaboration with provincial and territorial authorities, Indigenous partners, fishing and stewardship organizations and implicated communities to implement the Pacific Salmon Strategy
- make new investments and develop a conservation strategy to restore and rebuild wild Atlantic salmon populations and their habitats
- continue to work with the Minister of Environment and Climate Change and partners to ensure Canada meets its goals to conserve 25 per cent of our lands and waters by 2025, and 30 per cent of each by 2030, working to halt and reverse nature loss by 2030 in Canada, achieve a full recovery for nature by 2050 and champion this goal internationally...ensure that this work remains grounded in science, Indigenous knowledge and local perspectives
- renew and expand the Coastal Restoration Fund to restore aquatic habitats
- support community shoreline and oceans plastic cleanup efforts
- in partnership with Indigenous Peoples, continue to implement commitments made under the Oceans Protection Plan, and support the Minister of Transport in launching the next phase of the Oceans Protection Plan to continue efforts to deliver world-leading marine safety systems, increase protection for marine species and ecosystems and create stronger partnerships with Indigenous and other coastal communities, while strengthening marine research and science
- work with Indigenous partners to better integrate traditional knowledge into planning and policy decisions
- make new investments in coastal and ocean areas that have a high potential to absorb and store carbon, like tidal wetlands, seagrass meadows and riparian habitats



- modernize the *Oceans Act* to explicitly consider climate change impacts on marine ecosystems and species in regional ocean management, ensuring the Act provides for measurable progress indicators and objectives, and create a national, interdisciplinary working group focused on climate-resilient ocean conservation planning
- expand climate vulnerability work to better inform marine conservation planning and management

More information on the Department's plans to achieve these results and deliver on these commitments can be found below.

DFO has a significant responsibility to protect the health of Canada's oceans and aquatic ecosystems. Programs in the Aquatic Ecosystems core responsibility work to protect fish habitats and species at risk, manage aquatic invasive species, and perform scientific research to support decision-making.

### Protect and restore ocean ecosystems

The Department will build on its success in achieving past targets and leverage the Government's \$976.8 million investment through Budget 2021 [announced<sup>xi</sup>](#) in July 2021 to continue its vital work to conserve 25 per cent of Canada's oceans by 2025 and 30 per cent by 2030. The establishment and effective management of marine protected areas<sup>9</sup> (MPAs) and [other effective area-based conservation measures<sup>xx</sup>](#) (OECMs)<sup>10</sup>, such as marine refuges, are key to this work. These measures increase biodiversity and strengthen ecosystems' abilities to resist, recover from, or adapt to, disturbances caused by overexploitation or climate change. They can also benefit Indigenous and other coastal communities by supporting subsistence and traditional harvesting of marine resources by Indigenous peoples, providing conservation and tourism-related economic opportunities, and, over time, helping to regenerate fish stocks. As part of the MPA establishment process and where required under Comprehensive Land Claim Agreements (e.g. Nunavut Agreement), the Government of Canada will negotiate [Impact Benefit Agreements<sup>xxi</sup>](#) with designated organizations. Key initiatives between 2022-23 and 2025 include the following:

- consult and collaborate with partners and stakeholders to establish new MPAs and OECMs to achieve the 25 per cent marine conservation target by 2025
- effectively manage existing MPAs and OECMs so that they achieve their conservation objectives
- implement [new federal protection standards<sup>xxii</sup>](#) for MPAs and marine OECMs
- host the [fifth International Marine Protected Areas Congress<sup>xxiii</sup>](#) (IMPAC5) from September 2-8, 2022

<sup>9</sup> A Marine Protected Area is part of the ocean that is legally protected and managed to achieve the long-term conservation of nature.

<sup>10</sup> An other effective area-based conservation measure is a geographically defined area other than a protected area which is governed and managed in ways that achieve positive and sustained long-term outcomes for the in situ conservation of biodiversity with associated ecosystem functions and services and, where applicable, cultural, spiritual, socio-economic, and other locally relevant values.

One of the Department's key tools for identifying areas for marine conservation is Marine Spatial Planning (MSP). MSP is a collaborative approach that brings together federal, provincial, territorial, and Indigenous governments, as well as other stakeholders, to better coordinate the use and management of oceans to achieve sustainable ecological, economic, cultural, and social objectives. DFO is working to ensure this planning is informed by science and Indigenous knowledge. For example, in 2022-23, the Canadian Marine Spatial Planning Atlas-East and The Canadian Marine Spatial Planning Atlas-West web applications will be released. The Atlases will display national and regionally-specific datasets relating to six themes of data relevant to marine spatial planning: (1) Ecosystem and Ocean Knowledge; (2) Local, Socio-cultural and Traditional Knowledge; (3) Boundaries and Management Areas; (4) Human Use; (5) Synthesis Areas; and, (6) Impacts and Threats Assessments. The Department has published several dozen datasets on the [Federal Geospatial Platform](#)<sup>xxiv</sup> to ensure that marine spatial planning is informed by science. Additional datasets are also scheduled to be published in 2022-23.

Marine spatial planning processes are being undertaken in five areas: the Pacific North Coast, the Pacific South Coast, the Bay of Fundy/Scotian Shelf, the Newfoundland-Labrador Shelves, and the Estuary and Gulf of St. Lawrence. The first four regions anticipate developing first generation plans by March 2024. For the Estuary and Gulf of St. Lawrence, improved collaboration with partners to build on the Gulf of St. Lawrence Integrated Management Plan by 2024 will be a key step towards undertaking MSP in this region. The development of a collective vision and plan to guide the sustainable management of marine activities in each area will provide greater certainty and assist stakeholders in planning activities and investments.

Ocean accounts, as explained below, can support marine spatial planning and other departmental initiatives in supporting evidence-based decision-making through transparent and accessible ocean data, while providing metrics for monitoring progress on the implementation of sustainable ocean development initiatives. This will help Canada achieve its ambitious marine conservation objectives while also allowing for sustainable growth in ocean sectors as part of a resilient blue economy.

Between April 2020 and March 2021, 42 marine spatial planning-related grants and contribution agreements were approved with the goal of building and increasing Indigenous capacity.

Human activities in or near the ocean can introduce stressors like [noise into the marine environment](#)<sup>xxv</sup>, potentially disrupting ecosystems and reducing the ability of species to travel, communicate, and find food. In 2022, DFO plans to publish a draft Ocean Noise Strategy for Canada, followed by a public comment period and engagement sessions with partners and stakeholders. Publication of the final Ocean Noise Strategy for Canada is anticipated later in 2022-23. The strategy will establish a whole-of-government approach and long-term plan to guide federal science research, technology development, and management of human-produced noise in Canada's oceans. This is just one example of DFO's work with its partners to understand and address the impacts of environmental stressors, thereby helping to protect marine ecosystems and ensure that Canada's oceans economy can grow in a sustainable, environmentally-responsible way.

The Department will continue to implement the [Charlevoix Blueprint for Healthy Oceans, Seas and Resilient Coastal Communities](#)<sup>xxvi</sup>. This includes addressing the threat to ecosystems of ocean plastic waste and marine litter. Canada's investments in mitigating marine pollution, both domestically and internationally, are seen as leading efforts to clean up the ocean.

In 2020-21, the Department conducted an [Evaluation of the Coastal Restoration Fund](#)<sup>xxvii</sup> (CRF), which helps restore coastal aquatic habitats (e.g., by restoring salt marshes to facilitate fish migration). The evaluation found that the CRF responded to an identified need to address threats to aquatic ecosystems and marine biodiversity loss along Canada's coastlines, that it was designed using national priorities identified as part of the Oceans Protection Plan and by working with stakeholders to identify regional priorities, and that as a result, it provided funding for large-scale, multi-year restoration projects that were aligned with national and regional priorities. The evaluation's findings as well as the lessons learned over the CRF's five-year mandate will inform DFO's consideration of any future funding program.

DFO works with Statistics Canada and the [Global Ocean Accounts Partnership](#)<sup>xxviii</sup> to develop and implement oceans accounts, which will structure the compilation of data on ocean-related economic activities, the extent and condition of ecosystems, and the value of ecosystem services (such as for carbon absorption). One example of the Department's oceans account work planned for 2022-23 is a collaboration with the University of British Columbia to map eelgrass beds in Canada to begin to estimate both their carbon sequestration capacity and the economic value of this carbon sequestration. This will help DFO explore ocean-based approaches to carbon sequestration and continue to protect and restore coastal and ocean areas that have a high potential to absorb and store carbon, like tidal wetlands, seagrass meadows, and riparian habitats. More broadly, the development of ocean accounts is important for ensuring, among other things, that future coastal development is based on a complete accounting of the value of natural and produced assets. Ocean accounts will inform policy, support decision-making, and provide metrics for monitoring progress on the implementation of sustainable ocean development initiatives.

#### **Protection of fish and fish habitat under the modernized *Fisheries Act***

To help minimize and avoid negative impacts on Canada's oceans and other aquatic ecosystems, DFO will continue to implement the recently modernized *Fisheries Act*, including the prohibitions against the death of fish (by means other than fishing) and the harmful alteration, disruption, or destruction of fish habitat unless authorized.

In support of the Act, the Department will continue to update the online [Fisheries Act Registry](#)<sup>xxix</sup> (which provides information about authorizations issued under the fish and fish habitat protection provisions of the Act) to provide additional guidance for the regulatory reviews of proposed development projects near water and promote integrated planning. Integrated planning involves collaborative work with partners and stakeholders to set conservation, protection, and restoration objectives for fish and fish habitat, and to devise management actions to meet those objectives. An essential component is the Indigenous Habitat Participation Program, which provides funding to Indigenous peoples to support consultation on authorization decisions, capacity building, and collaborative initiatives for the conservation and protection of fish and fish habitat, and engagement during the development of policy, program, and regulatory initiatives.

DFO is seeking input from Indigenous groups, partners and stakeholders to continue modernizing and/or developing policies, frameworks, instruments, and guidance to further implement the fish and fish habitat protection provisions of the *Fisheries Act*. Engagement materials and information are housed on the [talkfishhabitat.ca](https://talkfishhabitat.ca)<sup>xxx</sup> platform. This platform provides participants with information and updates, and ensures all input and feedback will be directed to the correct DFO team for consideration in product development.

DFO is in the early stages of planning and shaping a National Framework for Identifying, Establishing, and Managing Ecologically Significant Areas<sup>11</sup> (ESA Framework) that will be published in 2023. DFO is engaging with Indigenous groups as well as other partners and stakeholders on ESAs to provide information and seek early input on initial concepts related to an ESA Framework. Input received during engagement will be considered in the draft ESA Framework. Engagement is occurring through [talkfishhabitat.ca](https://talkfishhabitat.ca) and is supported by technical sessions including questions and answers, a fact sheet, and a survey.

Through responsive and integrated regulatory, planning, partnership, and monitoring activities, DFO aims to support the sustainability of fish and fish habitat in Canada. To demonstrate these functions and the progress made through new investments in the Fish and Fish Habitat Protection Program since 2019, DFO will publish reports on the different ways that DFO and its partners and stakeholders are working together to assess and manage threats to fish and fish habitat across the country. The first reports will be made publicly available in 2023. Feedback from the public will be sought on these initial reports, with a view to improving their scope and complexity over time.

DFO is also engaging partners and stakeholders in the development of a Prescribed Works and Waters regulation to improve the regulation of routine, low-impact projects. The regulation is being proposed to increase DFO's effectiveness at protecting fish and fish habitat (e.g., by mandating best practices) and increasing regulatory efficiency where the risk of impact is low. In 2022-23, the Department will continue to engage on this initiative with the aim of publishing a proposed regulation in *Canada Gazette*, Part I in 2023-24.

In 2022-23, DFO will also continue to engage on the modernization of the offsetting and banking policies, with the aim of having a new policy in place in 2023-24. Offsetting plans set out how the residual death of fish or the harmful alteration, disruption, or destruction of fish habitat from a project (after avoidance and mitigation have been undertaken) will be counter-balanced by project proponents. Fish habitat banking is the process of offsetting in advance project activities that are anticipated to cause impacts. The Department will take stock of how things have changed since the offsetting and fish habitat banking policies were first developed (in 2013 and 2016, respectively), what has been learned to date, and what can be further acquired from international best practices.

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<sup>11</sup> Ecologically Significant Areas are regulatory, area-based management tools established under the *Fisheries Act* to provide enhanced regulation of projects for the protection of fish and fish habitat deemed sensitive, highly productive, rare or unique.

### Aquatic invasive species

Aquatic invasive species (AIS) are fish, aquatic plants, and other organisms that can displace native species by competing for food, degrading habitats, and introducing diseases. The Department works to: prevent their introduction; respond rapidly to any new species detected; and, manage the spread of established AIS. Key work planned in 2022-23 will include the development of guidelines and policies for the continued implementation of the *Aquatic Invasive Species Regulations* (2015) and the ongoing training of federal and provincial officials who administer and enforce these regulations.

In response to the [Commissioner of the Environment and Sustainable Development's spring 2019 report on AIS<sup>xxxii</sup>](#), a national process for identifying and nominating species for addition to the *Aquatic Invasive Species Regulations* (2015) was developed and tested, and will be presented to the Canadian Council of Fisheries and Aquaculture Ministers in 2022-23. Also in 2022-23, a policy on the management of aquatic invasive plants will be finalized and a new image-recognition mobile application will be developed that will help the public identify and report [Grass Carp<sup>xxxiii</sup>](#) (a species of Asian Carp).

### Conservation and recovery of species

The Department works to protect and recover aquatic species at risk. Under the Nature Legacy for Canada, a large-scale, cross-departmental investment in Canada's biodiversity and ecosystems, DFO is working to improve its results by transitioning from single-species approaches to place-based, multi-species, and threat-based approaches, where possible. To support this transition, DFO is developing a Pan-Canadian Approach for the Conservation of Aquatic Species at Risk to help guide modernized delivery of DFO's responsibilities under the *Species at Risk Act<sup>xxxiii</sup>*. The goal is to better support ecosystems as a whole, thereby protecting more species more effectively, by focusing on common threats and geographical areas where biodiversity loss and conservation can be most effectively addressed. Engaging with Indigenous groups as well as with other partners and stakeholders is essential in shaping the approach. DFO plans to engage externally throughout 2022 and aims to incorporate feedback and develop the approach in 2023.

Applying multi-species approaches, such as place- and threat-based approaches, can help to address the decline in species diversity by protecting more species, more effectively, and can also provide opportunities for collaboration.

Pacific salmon are socially, culturally, and economically important to many communities, and a critical part of many ecosystems, but their populations have been declining due to a combination of climate, habitat, and harvesting pressures. In 2021, the Government of Canada launched the [Pacific Salmon Strategy Initiative<sup>xxxiv</sup>](#) (PSSI), its largest-ever investment to stabilize, protect, and rebuild salmon populations. The PSSI will focus on four key areas: conservation and stewardship, salmon enhancement, harvest transformation, and integration and collaboration. In 2022-23, DFO will target habitat restoration, increase science capacity, and work with First Nations and stakeholders on stewardship to protect and restore Pacific salmon and their habitat. The Department plans to launch a Salmon Stewardship Directorate within DFO, including a Habitat Restoration Centre of Expertise. For more information on the PSSI, please see the [Fisheries](#) core responsibility above.

Like Pacific salmon, the iconic wild Atlantic salmon are also facing declines, with many populations now assessed as endangered or threatened. In 2022-23, the Department will advance engagement with Indigenous people, partners, and stakeholders in the development of a Wild Atlantic Salmon Conservation Strategy. This strategy will serve to strengthen the implementation of Canada's [Wild Atlantic Salmon Policy](#)<sup>xxxv</sup>, which has a goal to restore and maintain healthy wild Atlantic salmon populations for now and for future generations of Canadians.

The [Whales Initiative](#)<sup>xxxvi</sup> includes the Department's many activities to understand and manage whales in Canadian waters. This initiative focuses on three endangered species and populations – Southern Resident killer whales (SRKW) in British Columbia, St. Lawrence Estuary Belugas (SLEB) in Quebec, and North Atlantic right whales (NARW) in Atlantic Canada – but is designed to provide benefits across whale species.

In 2022-23, the Department will complete the following:

- implement management measures in support of the recovery strategies for SRKW, NARW, and SLEB
- expand the Marine Mammal Response Program by establishing contracts with organizations in Canada that are experts at responding to incidents involving marine mammals, such as a whale entangled in rope or injured by a vessel (This includes providing funds to support training to organizations and indigenous communities along with the appropriate equipment needed to safely respond to marine mammal incidents. For example, funds have been given to a new response team to help large whales in distress in the Gulf of St. Lawrence, which helps fill in a response gap in Atlantic Canada.)

As well as providing economic benefits through tourism and other activities, wild whale species have important intrinsic and cultural value, such as whale harvesting for food, social, and ceremonial purposes. For more information on the Department's work to protect these iconic species, please see the [Fisheries](#) core responsibility above.

In the spring of 2022, DFO will launch a computer application that will provide near real-time information on the distribution of NARW to Canadians. It will incorporate whale detections from a variety of sources from inside and outside of government and, over time, will be expanded to include other whale species and areas. The Department will also investigate the possibility of displaying information about relevant management measures designed to reduce the risks to NARW. Up-to-date information will allow the fishing and shipping sectors to better plan the timing and location of their activities. This scientific information will also inform DFO's management decisions as the Department works to protect and restore NARW populations.

### **Reconciliation with Indigenous peoples**

The Department will continue to collaborate with Indigenous partners and work to better integrate traditional knowledge into planning and policy decisions. DFO will establish an aquatic ecosystems-specific Indigenous Advisory Circle (IAC) to ensure the consideration of Indigenous perspectives in the development of key policy, program, and regulatory initiatives. The IAC will consist of First Nations, Inuit, and Métis members from across the country and will include Elders and youth. The IAC's guidance will improve DFO's ability to consider Indigenous perspectives and address concerns before launching broader engagement on key policies, programs, and regulations.



Collaborative arrangements regarding stewardship for species at risk will continue to be encouraged through programs such as the Aboriginal Funds for Species at Risk, and the Canada Nature Fund for Aquatic Species at Risk, which seeks to promote strategic and lasting collaboration with and between Indigenous peoples and stakeholders, with preference given to projects that clearly demonstrate Indigenous partnerships or leadership in project planning, development, and/or implementation.

Agreements established with Indigenous groups under the Indigenous Habitat Participation Program result in the provision of contribution funding to support Indigenous participation in the conservation and protection of fish and fish habitat. Funding supports Indigenous participation in the development of policy, program, and regulatory initiatives in support of the implementation of the modernized fish and fish habitat protection provisions of the *Fisheries Act*, development of capacity in the inland areas of the country, and initiatives such as planning, monitoring, and data collection. Capacity building includes training of Indigenous community members in areas related to aquatic ecosystems, monitoring, data collection, etc. Agreements to provide grant funding support the participation of Indigenous groups in consultation related to specific authorization and other decisions of the Fish and Fish Habitat Participation Program.

In response to the Phase III consultations on the Trans Mountain Expansion Project (TMX), DFO continues to work with partner agencies and 129 eligible Indigenous Groups in British Columbia and Alberta to advance three accommodation measures and Canada Energy Regulator recommendations. Active engagement with Indigenous communities has informed the delivery approach for the Aquatic Habitat Restoration Fund, the Terrestrial Cumulative Effects Initiative, and the Salish Sea Initiative. Input from Indigenous Groups has informed the development and implementation of each initiative, which will provide capacity and project funding support to actively participate in fish and fish habitat restoration activities, cumulative effects studies, and the monitoring and evaluation of impacts of human activities on local marine ecosystems.

In addition, the Port Renfrew multi-purpose marine response facility in Port Renfrew, British Columbia was approved as a CCG accommodation measure for the Pacheedaht First Nation (Pacheedaht) under the 2019 reconsideration of TMX. Collaborative discussions are ongoing to advance the establishment of the facility, which will include search and rescue as well as environmental response services to address Pacheedaht's concerns over oil spills. CCG remains committed to enhancing response capacity in the Port Renfrew region to keep mariners safe and to better protect Pacheedaht's territory and the coast of British Columbia.

The [Evaluation of Grants and Contributions Programming in the Ecosystems and Oceans Science Sector<sup>xxxvii</sup>](#) was conducted to determine whether activities were being implemented as intended, what was working well, and whether adjustments were required. These funding programs promote and facilitate the development of marine scientific knowledge and related science activities by external organizations in areas aligned with DFO priorities. In response to the evaluation's findings, additional information on all of the sector's grant and contribution programming has been made available on the Department's Funding Opportunities website. DFO launched an open call for project proposals via its Ecosystems and Oceans Science Contribution Framework website in 2021 that included comprehensive information and guidance for applicants. Open calls will continue to provide funding opportunities to build expertise in ocean and freshwater science and technology in areas that support the mission of the Department to increase our understanding of ocean and freshwater environments.



## Gender-based analysis plus



The [2020 Global Ocean Science Report](#)<sup>xxxviii</sup> revealed that women in ocean science continue to be underrepresented, with women representing about 7 to 72 per cent of all ocean science personnel (i.e. researchers, technicians, and supporting staff) depending on the country, with the global average at 37 per cent. DFO, on behalf of Canada, will continue to demonstrate leadership in advancing gender equity in ocean science in the context of the United Nations Decade of Ocean Science for Sustainable Development 2021-2030 (“Ocean Decade”) and through our role as the Commonwealth Blue Charter Champion of Ocean Observation. As part of its efforts to advance gender equity, DFO is providing financial support for projects such as the World Maritime University’s research project focused on empowering women for the United Nations Decade of Ocean Science for Sustainable Development (2021-2030).

In addition, DFO will co-host the 4th International Council for the Exploration of the Sea (ICES) and North Pacific Marine Science Organization (PICES) Early Career Scientist Conference with ICES and PICES in July 2022 (St. John’s, Newfoundland) that is focused on providing early career scientists with programming to foster the development of scientific networks and build scientific knowledge and understanding.

DFO programs will continue to study GBA Plus methods, update reporting templates and tracking tools to collect better data to supplement information such as census data and academic papers, and consider the disproportionate effects that harm to aquatic ecosystems can have on certain groups. For example, as part of its work to report on the effectiveness of marine protected areas, DFO will conduct interviews and surveys to improve its data on the creation of employment opportunities for local coastal communities, including Indigenous peoples, associated with the establishment and ongoing management of marine protected areas. This information will inform the Department’s work to improve its programs and services so as to achieve more inclusive outcomes.

## United Nations’ (UN) 2030 Agenda for Sustainable Development and the UN Sustainable Development Goals

For additional information on how the Department is advancing the UN Sustainable Development Goals, please refer to DFO’s [2020-2023 Departmental Sustainable Development Strategy](#)<sup>xxxix</sup>.

## Experimentation




DFO will continue a research program that applies a mix of traditional and new techniques to better describe the composition of the diets of pinnipeds, such as seals. Looking through scat (i.e., animal droppings) is a technique that has been used for decades and captures the diet in terms of recent meals, but not always with high precision. The same scat samples can be analyzed using a new technique, DNA metabarcoding, which provides more accurate and precise information on what species were eaten. Tissues collected from animals can be analyzed using other relatively new techniques, fatty acid and stable isotope analyses, to provide a picture of the diet over the long term (i.e., weeks to months). All three techniques have their own biases and uncertainties but together provide a clearer picture of the pinniped diet (i.e., what was eaten and where it was eaten). Bringing the three techniques together should result in greater precision in diet estimates and the development of innovative analytical techniques.

## Key risk(s)

Work under the Core Responsibility relies upon coordinated progress across multiple areas of expertise such as aquatic ecosystem science and environmental science, etc. Thus, the overall results may be influenced by various risks. For example, there is a risk that the Department may lack the ability to provide timely scientific data and advice in supporting the evidence-based decision-making. In response, mitigation aiming to reduce the risks have been developed, such as obtaining information by using alternative meeting platforms and minimizing data gaps by developing an interim data assessment approach. DFO will continue to monitor these risks and take action to respond to these risks.

## Planned results for Aquatic ecosystems

The following table shows, for Aquatic ecosystems, the planned results, the result indicators, the targets and the target dates for 2022–23, and the actual results for the three most recent fiscal years for which actual results are available.

	Departmental result	Departmental result indicator	Target	Actual results
Negative impacts on Canada's oceans and other aquatic ecosystems are minimized or avoided		Percentage of marine and coastal areas that are protected	At least 25% by 2025	2018-19: 7.92% 2019-20: 13.81% 2020-21: 13.81%
		Percentage of development projects occurring in or near water that effectively avoid, mitigate or offset impacts to fish and fish habitat	At least 100% by March 31, 2023	2018-19: 100% 2019-20: 93% <sup>12</sup> 2020-21: 95% <sup>13</sup>
		Percentage of aquatic species / populations at risk listed under the Species at Risk Act for which a recovery strategy / management plan is completed	At least 80% by March 31, 2023	2018-19: 75% 2019-20: 81% 2020-21: 86%
		Percentage of approved requests for science advice on aquatic invasive species that are completed	At least 90% by March 31, 2023	2018-19: 90% 2019-20: 67% <sup>14</sup> 2020-21: 67% <sup>15</sup>
	Scientific information on Canada's oceans and other aquatic ecosystems is available to inform management decisions	Number of science products related to aquatic ecosystems that are available	At least 60 by March 31, 2023	2018-19: 60 2019-20: 60 2020-21: 60
		Percentage of scheduled science advisory processes on aquatic ecosystems that were completed	At least 90% by March 31, 2023	2018-19: 100% 2019-20: 77% <sup>16</sup> 2020-21: 77% <sup>17</sup>

<sup>12</sup> A total of 69 site visits identified a compliance or effectiveness issue that was unresolved as of March 31, 2020, though this does not necessarily indicate a permanent or irreversible impact to, or loss of, fish or fish habitat. Corrective actions may be ongoing and DFO provides guidance where needed.


<sup>13</sup> Of the 613 projects monitored, 31 projects were assessed as having compliance and effectiveness measures that were not adequate.

<sup>14</sup> Performance declined due to delays related to COVID-19 mitigation measures late in the fiscal year, and the work was completed shortly after the target date.

<sup>15</sup> Some of the planned advisory processes were deferred due to COVID-19 restrictions and other challenges or were withdrawn.

<sup>16</sup> Seven scheduled science advisory processes were delayed. Processes were deferred due to changing client sector requirements and issues related to Science capacity and data availability. Steps are in place to improve the prioritization and definition of requirements.


<sup>17</sup> Some of the planned advisory processes were deferred due to COVID-19 restrictions and other challenges or were withdrawn.

	Departmental result	Departmental result indicator	Target	Actual results
Enhanced relationships with, involvement of, and outcomes for Indigenous people		Number of agreements / arrangements involving Indigenous groups	At least 225 by March 31, 2023	2018-19: N/A 2019-20: N/A 2020-21: 52
		Number of Indigenous people trained through agreements / arrangements	At least 208 by March 31, 2023	2018-19: N/A 2019-20: N/A 2020-21: Data not available
		Number of Indigenous people employed through agreements / arrangements	At least 2 by March 31, 2023	2018-19: N/A 2019-20: N/A 2020-21: Data not available

Note: N/A in the "Actual results" column indicates that the performance indicator was not in effect at that time, and therefore, historical data may not be available. In cases where historical data is available, past results are presented.


### Planned budgetary spending for Aquatic ecosystems

The following table shows, for Aquatic ecosystems, budgetary spending for 2022–23, as well as planned spending for that year and for each of the next two fiscal years.

	2022-23 budgetary spending (as indicated in Main Estimates)	2022-23 planned spending	2023-24 planned spending	2024-25 planned spending
	391,884,341	391,884,341	282,991,537	254,039,126

### Planned human resources for Aquatic ecosystems

The following table shows, in full-time equivalents, the human resources the department will need to fulfill this core responsibility for 2022–23 and for each of the next two fiscal years.

	2022-23 planned full-time equivalents	2023-24 planned full-time equivalents	2024-25 planned full-time equivalents
	1,762	1,279	1,233

The financial, human resources and performance information for the Department of Fisheries and Oceans' Program Inventory is available on [GC InfoBase](#)<sup>xl</sup>.

# Marine navigation

## Description

Provide information and services to facilitate navigation in Canadian waters.

## Planning highlights

The Marine Navigation core responsibility is focused on advancing the following Departmental Results:

- mariners safely navigate Canada's waters
- a Canadian maritime economy that is supported by navigable waters
- enhanced relationships with, involvement of, and outcomes for Indigenous people



The indicators used to measure progress towards these results appear in the [Planned Results](#) table beginning on page 34.

Key priorities for 2022-23 and beyond include the following commitments from the [Minister's mandate letter](#)<sup>xli</sup>:

- in partnership with Indigenous Peoples, continue to implement commitments made under the [Oceans Protection Plan](#)<sup>xliii</sup>, and support the Minister of Transport in launching the next phase of the Oceans Protection Plan to continue efforts to deliver world-leading marine safety systems, increase protection for marine species and ecosystems and create stronger partnerships with Indigenous and other coastal communities, while strengthening marine research and science
- work with Indigenous partners to better integrate traditional knowledge into planning and policy decisions
- work with the Minister of Public Safety, the President of the Queen's Privy Council for Canada and Minister of Emergency Preparedness, the Minister of Transport and the Minister of Health, among other colleagues, to ensure the Government of Canada continues to be prepared to proactively mitigate, and respond to, emerging incidents and hazards

More information on the Department's plans to achieve these results and deliver on these commitments can be found below.

## DID YOU KNOW?



Under the *Oceans Protection Plan*, DFO and CCG continue to prevent accidents through actions such as providing improved navigation products (e.g. charts) and services (e.g. transmitting warnings about marine hazards).

DFO and CCG are responsible for ensuring that Canada's waters are safe and navigable for mariners. This includes the charting and managing of waterways, as well as the management of marine communications and traffic services, aids to navigation, and icebreaking services.

### Modernize marine navigation programs and safety services

To improve the safety, security, and efficiency of maritime transportation and better protect the marine environment, CCG will finalize a modernization strategy for marine navigation programs and safety services in 2022-23. The modernization strategy aims to enhance the delivery of CCG's marine navigation services through actions such as: leveraging new technologies; using more sensor data; and, advancing CCG's ability to collect, process, synthesize, and analyze data, and to readily exchange it with its partners in an integrated and streamlined way. CCG intends to integrate existing programs, systems, and tools to deliver seamless, efficient, and real-time services to maritime clients and federal, provincial, territorial, and Indigenous partners.

#### DID YOU KNOW?



Ice jams (also known as ice plugs) occur when ice accumulates and blocks the flow of a river. In addition to icebreaking for the shipping industry, transporting goods to Northern communities, keeping harbours open, and freeing trapped vessels, CCG icebreakers work to prevent and break up ice jams, thus reducing the chance that communities will be flooded.

Continuing to implement e-Navigation initiatives and digitalizing CCG's services will ensure accessibility to marine navigation information including safety, ice, and weather information, environmental data, vessel traffic, channel depths, speed restrictions, and information on marine protected areas. E-navigation will contribute to marine safety and navigation, environmental and marine mammal protection, increased maritime domain awareness, and will support local, regional, and national economies.

Through Canada's Oceans Protection Plan, CCG will be adding eight new radar coverage areas with six on the West coast and two on the East coast. The new radar installations will be instrumental in ensuring the reliability and accuracy of vessel traffic monitoring through Canadian waters. CCG is also modernizing its ageing operations network (OpNet) infrastructure and implementing a business continuity plan for its Marine Communications and Traffic Services program. Operational network equipment modernization will increase the robustness of the system and the redundancy built in as part of this project will ensure a continuity of communication in the event of a failure at a remote site. The OpNet project is scheduled to be completed in 2022-23. Both of these initiatives are instrumental in ensuring that Canada continues to have a world-leading marine safety system.

An evaluation was conducted to examine the performance and efficiency of the [Shore-based Asset Readiness \(SBAR\) Program](#)<sup>xliii</sup> from 2014-15 to 2018-19. This program is responsible for the life-cycle management of non-fleet assets (e.g. buoys, electronic navigation systems). The program ensures that these assets are available, capable, and reliable to support the delivery of CCG programs. The evaluation resulted in recommendations to improve asset performance data, establish targets for service availability, increase availability and reliability of asset inventory data, and improve the procurement process.

In 2022-23, CCG will take the following actions to address these recommendations:

- update the methodology used in the asset condition assessment program and continue standardizing its collection processes
- begin implementing updated service level agreements (which contain targets for service availability)
- apply a nationally consistent methodology for prioritizing the maintenance of shore-based assets
- improve the reliability of its inventory data by including assets that had been identified as missing from its asset management system

### Digital navigational services

The Department will continue its work to provide more hydrographic<sup>18</sup> data and services digitally to support both e-navigation<sup>19</sup> and non-navigational research (e.g. the use of bathymetric, or water-depth, data in research on fish and marine mammal habitat, coastal planning, ecosystems management, and earthquake and fault studies). In particular, the next phase of the integrated water-level monitoring system will be released and all nautical publications will be available in digital formats that will be regularly updated. The system is an IT solution that pulls water level information in real-time from the Canadian Hydrographic Service tide gauges in Canada and makes it available publicly. This information is critical for safe navigation and effective oil spill response, both of which depend on up-to-date tsunami and sea level rise monitoring and storm surge modelling. As new computer applications are developed, DFO's Canadian Hydrographic Service and CCG will collaborate to develop a seamless digital experience for users of the Department's digital navigational products and services. The goal is to provide mariners with up-to-date information to support safe marine navigation and the protection of habitat and critical infrastructure.

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<sup>18</sup> Relating to hydrography, the science of surveying and charting waters.

<sup>19</sup> Electronic navigation (e-navigation) is the collection, integration, exchange, presentation, and analysis of marine information on-board and ashore by electronic means to enhance navigation and related services for safety and security at sea and protection of the marine environment.

### Reconciliation with Indigenous peoples

In support of the [2021 Speech from the Throne](#)'s<sup>xliiv</sup> priority of moving faster on the path to reconciliation, and of Indigenous self-determination and socio-economic development, CCG will implement the first phase of its newly developed National Indigenous Relations Strategic Framework. Linked to, and informed by, federal reconciliation mandates, legislation such as the *United Nations Declaration on the Rights of Indigenous Peoples Act*, and principles outlined in the DFO Reconciliation Strategy, the Framework has two interconnected goals. Firstly, it will create tangible processes to capture and organize reconciliation-related activities undertaken by CCG and enable the setting of annual organizational and planning priorities, which will then be informed by collaboration with our Indigenous partners. This will allow CCG to create stronger internal long-term and integrated structures. Secondly, it will guide respectful and meaningful collaboration and engagement with First Nations, Inuit, and Métis partners on the incorporation of partner feedback into CCG processes, policies, and tools.

The collaborative and distinctions-based approach used to establish the boundaries and priorities of the DFO and CCG Arctic regions will continue to serve as a model for other departments and agencies. The Arctic regions will continue to work with Inuit, First Nations, and Métis governments and organizations to establish governance frameworks to advance the unique interests and priorities for program and service delivery across the Arctic regions. The Arctic regions will continue to build on efforts to increase cultural awareness, Indigenous recruitment, procurement opportunities, and training in the Arctic.

Under Canada's Ocean Protection Plan, CCG will continue to work alongside Indigenous partners to advance their marine safety and emergency response needs and priorities, and to better protect their communities.

### Gender-based analysis plus



The [2020 Global Ocean Science Report](#)<sup>xliv</sup> revealed that women in ocean science continue to be underrepresented, with women representing about 7 to 72 per cent of all ocean science personnel (i.e. researchers, technicians, and supporting staff) depending on the country, with the global average at 37 per cent. DFO, on behalf of Canada, will continue to demonstrate leadership in advancing gender equity in ocean science and is providing financial support for projects such as the International Hydrographic Organization's Empowering Women in Hydrography Project, which includes training and development to enable more women to participate equitably in the field of hydrography and to assume more leadership or subject-matter expert roles in this field.

### United Nations' (UN) 2030 Agenda for Sustainable Development and the UN Sustainable Development Goals

For additional information on how the Department is advancing the UN Sustainable Development Goals, please refer to DFO's [2020-2023 Departmental Sustainable Development Strategy](#)<sup>xlvi</sup>.



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## Experimentation




DFO continually seeks to improve the scientific information it produces to inform management decisions. To this end, DFO will continue its Science Micro-innovation Funding Initiative that was recently established to promote and continue encouragement of innovative science within the Department. Though science innovation has been part of broader funding programs in the past, this Science Micro-innovation Funding Initiative is designed specifically to support DFO scientists in innovating, experimenting and/or 'test-driving' a new idea, solution or process within their work. DFO's scientific staff are able to propose innovative new ideas, request internal funding up to \$10,000, and receive a decision within a few weeks.

## Key risk(s)

A key risk for this Core Responsibility will be the Department's ability to adopt new services and programs and align them in a timely manner to the rapid pace of technological change, while addressing challenges in hiring staff with the skills and experience to meet the heightened scopes of the new initiatives (e.g., Modernizing Marine Navigation Program and Safety Services, Operational Fleet Decarbonization Plan). The Department is working to mitigate this risk by developing strategies to assist in the transformation and digitization of its services and programs to support safe and navigable waters. CCG is also collaborating with other National Safety and Security marine fleet departments to leverage available resources and share best practices to modernize and green its services and programs with the aim of achieving the results and priorities. The Department will continue to monitor these risks and adjust its risk mitigation strategies to respond accordingly.

## Planned results for Marine navigation


The following table shows, for Marine navigation, the planned results, the result indicators, the targets and the target dates for 2022–23, and the actual results for the three most recent fiscal years for which actual results are available.

	Departmental result	Departmental result indicator	Target	Actual results
	Mariners safely navigate Canada's waters	Rate of marine incidents versus vessel movements	At most 1% by March 31, 2023	2018-19: 0.03% 2019-20: 0.02% 2020-21: 0.03%
		Number of official navigational products created and/or updated from incorporation of new and/or archived modern hydrography per year in key areas	At least 200 by March 31, 2023	2018-19: 824 2019-20: 669 2020-21: 673
	A Canadian maritime economy that is supported by navigable waters	Rate of marine incidents versus vessel movements	At most 1% by March 31, 2023	2018-19: 0.03% 2019-20: 0.02% 2020-21: 0.03%
		Percentage of ship ice escort requests south of the 60 <sup>th</sup> parallel north that are delayed beyond level of service response time standards	Exactly 0% by June 30, 2023	2018-19: 8.2% 2019-20: 1.4% <sup>20</sup> 2020-21: 4% <sup>21</sup>
		Average time (in hours) beyond level of service response time standards for ice escort requests south of the 60 <sup>th</sup> parallel north	Exactly 0 by June 30, 2023	2018-19: 22 2019-20: 6.23 <sup>22</sup> 2020-21: 33.03 <sup>23</sup>
	Enhanced relationships with, involvement of, and outcomes for Indigenous people	Number of agreements / arrangements involving Indigenous groups	At least 4 agreements by March 31, 2023	2018-19: N/A 2019-20: N/A 2020-21: Data not available
		Number of Indigenous people employed through agreements / arrangements	Target will be established 2023-24	2018-19: N/A 2019-20: N/A 2020-21: Data not available

Note: N/A in the "Actual results" column indicates that the performance indicator was not in effect at that time, and therefore, historical data may not be available. In cases where historical data is available, past results are presented.

## Planned budgetary spending for Marine navigation

The following table shows, for Marine navigation, budgetary spending for 2022–23, as well as planned spending for that year and for each of the next two fiscal years.

	2022-23 budgetary spending (as indicated in Main Estimates)	2022-23 planned spending	2023-24 planned spending	2024-25 planned spending
	347,356,957	347,356,957	281,484,708	280,707,454

<sup>20</sup> Four escort missions were delayed due to operational requirements, icebreaker redeployed for search and rescue, and environmental factors including ice severity and movement of ice.


<sup>21</sup> Of the 161 escort requests received in 2020-21, 6 were delayed.

<sup>22</sup> The icebreaking program experienced four delays out of 284 requests. CCG achieved a high rate of success this year, given the challenging operational environment, and in comparison to previous years.

<sup>23</sup> There were a total of six delays totaling 198.17 hours beyond levels of service (79.18 hours in Atlantic, 0.62 hours in St-Lawrence, 118.37 hours in Great Lakes), for an average time of 33.03 hours.

## Planned human resources for Marine navigation

The following table shows, in full-time equivalents, the human resources the department will need to fulfill this core responsibility for 2022–23 and for each of the next two fiscal years.

	2022-23 planned full-time equivalents	2023-24 planned full-time equivalents	2024-25 planned full-time equivalents
	1,964	1,958	1,949

The financial, human resources and performance information for the Department of Fisheries and Oceans' Program Inventory is available on [GC InfoBase](#)<sup>xlvii</sup>.

# Marine operations and response

## Description

Provide marine response services and operate Canada's civilian maritime fleet.

## Planning highlights

The Marine Operations and Response core responsibility is focused on advancing the following Departmental Results:

- CCG has the capability to respond to on-water incidents
- Canada's civilian fleet has the capability to meet established service standards for clients
- enhanced relationships with, involvement of, and outcomes for Indigenous people



The indicators used to measure progress towards these results appear in the [Planned Results](#) table beginning on page 43.

Key priorities for 2022-23 and beyond include the following commitments from the [Minister's mandate letter](#)<sup>xlviii</sup>:

- in partnership with Indigenous peoples, continue to implement commitments made under the Oceans Protection Plan, and support the Minister of Transport in launching the next phase of the Oceans Protection Plan to continue efforts to deliver world-leading marine safety systems, increase protection for marine species and ecosystems and create stronger partnerships with Indigenous and other coastal communities, while strengthening marine research and science
- work with Indigenous partners to better integrate traditional knowledge into planning and policy decisions
- continue working with the Minister of Public Services and Procurement, with the support of the Minister of Innovation, Science and Industry, to renew the CCG fleet, advance the shipbuilding industry, including the process to add a third Canadian shipyard as a strategic partner to the National Shipbuilding Strategy, create middle class jobs and ensure Canada has the modern ships needed
- work with the Minister of Public Safety, the President of the Queen's Privy Council for Canada and Minister of Emergency Preparedness, the Minister of Transport and the Minister of Health, among other colleagues, to ensure the Government of Canada continues to be prepared to proactively mitigate, and respond to, emerging incidents and hazards

More information on the Department's plans to achieve these results and deliver on these commitments can be found below.

CCG provides search and rescue services, supports maritime security in collaboration with other federal departments and agencies, responds to marine pollution spills, and operates Canada's civilian maritime fleet. CCG needs specialized staff to perform these important duties, and will continue to work to ensure that its people have the support and training needed for a strong fleet today and in the future.

## Fleet renewal

Canada's economy depends on a strong CCG fleet to keep mariners safe, protect coasts and waterways, and deliver commercial goods and other vital services. CCG's vessels are, on average, 40 years old. As they age, these vessels become more costly to maintain and are more frequently taken out of operation for unscheduled repairs. In 2019, the [Government of Canada announced](#)<sup>xlix</sup> funding for the renewal of CCG's large vessel fleet, with up to 16 Multi-Purpose Vessels (MPV) (suitable for light icebreaking, environmental response, aids to navigation, and offshore search and rescue), up to six Program Icebreakers, and two Arctic and Offshore Patrol Ships (AOPS), in addition to the five new large ships that were already part of the [National Shipbuilding Strategy](#)<sup>i</sup>. A key principle in the design of the new vessels is mission modularity, which will give the vessels the flexibility to take on different roles by adding or removing modules of equipment. For example, modules may be created to add laboratory facilities to a vessel in order to perform certain science missions. The addition of modern, versatile vessels will enable CCG to continue delivering vital services such as icebreaking, search and rescue, and marine pollution response, while meeting the evolving challenges driven by climate change.

In May 2021, CCG [announced](#)<sup>ii</sup> the procurement of two Polar Icebreakers. The new icebreakers will have capacity and ability beyond that of Canada's current largest icebreaker, CCGS *Louis S. St-Laurent*. With their enhanced capabilities, these larger, more powerful Polar icebreakers will enable CCG to conduct year-round operations in Canada's Arctic. Their greater endurance will ensure they can operate at higher latitudes for longer periods, and will allow the fleet to better support Indigenous peoples and northerners, strengthen Arctic sovereignty, advance high Arctic science, and better respond to maritime emergencies. Delivery of one Polar Icebreaker is required by 2030 to align with the planned retirement of CCGS *Louis S. St-Laurent*. Through their construction and service, the Polar icebreakers will contribute to growing Canada's blue economy and create more opportunities in coastal communities. They will strengthen CCG for the long-term, and ensure that maritime services and science platforms are available year-round in Arctic waters.

There are several key fleet renewal milestones planned for 2022-23, including the delivery of up to four search and rescue lifeboats. CCG also expects to advance several other projects in 2022-23 with contracts for engineering work on the Polar Icebreaker and MPVs at Vancouver Shipyards, the build contract amendment for the two AOPS at Irving Shipbuilding, and the build contract award for one Near-Shore Fisheries Research Vessel. These vessels are significant to the renewal of CCG's fleet and will provide essential services to Canadians following delivery.

To continue to provide essential services to Canadians while awaiting the new vessels, CCG has put in place a comprehensive program to extend the life of current vessels until replacements are delivered. For example, in December 2021, CCG [announced](#)<sup>lii</sup> the award of contracts for refit and vessel life extension on seven of its ships. Five ships will undergo planned refit work to ensure they remain in good working order, in compliance with Canadian maritime regulations, and ready to be used. The other two ships will be dry-docked for vessel life extension work (maintenance conducted over a number of months to increase their operational life). In addition

**DID YOU  
KNOW?**



The National Shipbuilding Strategy is designed to equip the Royal Canadian Navy and the Canadian Coast Guard with much-needed vessels built in Canada, bring predictability to vessel procurement, and allow the government and shipyards to make significant investments in Canada's marine industry, such as developing and maintaining expertise.

to ensuring these vessels can continue to keep Canada’s waterways open to allow for the free movement of people and goods, this maintenance work will provide good, well-paying jobs for Canadians in shipyards in British Columbia, Ontario, Quebec, and Nova Scotia.

The current vessel life extension program (Phase 1) is scheduled to run from 2020 to 2029 and will see \$956.5 million of investment into the existing CCG fleet. Preparations are underway for Phase 2, with a planned duration of another 12 years, to bring the total over both phases to \$2.01 billion. The specific vessels that will see life extensions will be adjusted over the life of the program to ensure that operational levels are consistent. The current plan for Phase 1 will see 76 vessel life extensions, ensuring that the existing CCG fleet can continue operations while awaiting the new vessels.

CCG has also purchased interim icebreakers to supplement the existing fleet during vessel life extension and repair periods. In November 2021, CCG announced the purchase of a fourth interim icebreaker. It is a commercial icebreaker that will be upgraded to meet CCG standards, and will then perform icebreaking duties, be available for search and rescue, and tend CCG’s navigational buoys in the Great Lakes, St. Lawrence, and Atlantic regions. For information on the other three interim icebreakers, please see [CCG’s website](#)<sup>liii</sup>.

### Reconciliation with Indigenous peoples

In support of the [2021 Speech from the Throne’s](#)<sup>liv</sup> priority of moving faster on the path to reconciliation, CCG (with support from Transport Canada) and Heiltsuk First Nation (“Heiltsuk Nation”) will conduct a four-month pilot project under which CCG will share reports of marine pollution with Heiltsuk Nation. The results of this pilot project will inform the development of protocol agreements between CCG and Heiltsuk Nation on communications and collaboration during marine incidents. The results will also be considered in future notification arrangements with other First Nations, and in the development of CCG programs and services. The goals of this work are to inform and complement the establishment of Heiltsuk Nation’s Marine Emergency Response Teams initiative, increase response capacity within Indigenous communities, and further integrate these communities into Canada’s marine safety system.

**DID YOU KNOW?**



In partnership with Indigenous peoples, CCG continues to improve the response to marine pollution through the Oceans Protection Plan.

In 2022-23, CCG will continue to implement the Trans Mountain Pipeline Expansion Project (TMX) accommodation measure ‘Co-Developing Community Response’ (CDCR). Under this CCG-led initiative, funding is provided to eligible Indigenous communities along the TMX tanker route to increase their capacity to participate in oil spill preparedness and response as well as marine incident management. Activities supported include training, exercising, and equipment acquisition. CDCR helps define a more meaningful role for Indigenous communities within Canada’s broader marine response system, as well as empowering these communities to protect culturally important and sacred sites on their traditional territories and mitigate risks posed by project-related shipping.

CCG is strongly committed to building cultural competency and safety – educating its employees on Crown-Indigenous relations and the histories of First Nation, Inuit, and Metis peoples with the goal of creating safe space for Indigenous employees.

### Search and rescue

CCG's maritime Search and Rescue (SAR) program is responsible for delivering and maintaining preparedness for the 5.3 million square kilometer maritime component of the federal SAR system, with the support of stakeholders and partners, including the CCG Auxiliary (CCGA) and the Department of National Defence. Through communication, coordination, and delivery, the program increases the chances of rescue for people caught in on-water distress situations.

Communities are often the first responders to marine incidents in their surrounding waters and sometimes in remote locations are the only responder. For this reason, under the Oceans Protection Plan, CCG developed the Indigenous Community Response Training (ICRT) program in British Columbia. This initiative, which has seen great success, will continue to support Indigenous participation in marine search and rescue training and response activities. Since inception, the ICRT program has delivered more than 100 training courses and exercising opportunities to coastal First Nations in British Columbia. The SAR program also funds the Coastal Nations Coast Guard Auxiliary non-profit organization in the Province to support efforts to build community-based marine response capacity.

### Environmental response

In 2022-23, CCG will implement its new **Environmental Response Equipment Life Cycle Management Program**. This program includes both preventive and corrective maintenance measures to keep environmental response (ER) vessels, equipment, and other assets in proper working order and ready to respond to marine pollution incidents when required.

The new program will ensure CCG's operational response capability is aligned with industry standards. Specific elements of the new program include:

- establishment of a robust maintenance regime to ensure operational readiness of equipment
- establishment of performance and configuration baseline standard of ER assets
- development of long-term strategies for work and resource requirements, including trend analysis of technical support, to optimize the life-cycle of ER assets
- maintenance of current asset records of the location and quantity of resources through CCG's Asset Management System

**DID YOU KNOW?**



*CCG reduces the impacts of marine pollution in Canadian waters through national and regional emergency planning, specialized response teams strategically located across Canada, and an incident command system that manages responses to marine spills.*

The overall program is a substantive improvement in the care and maintenance of ER assets and will contribute to CCG's ability to respond to marine pollution incidents in Canada.

To continue protecting Canada's waters, coasts, and coastal communities from marine pollution, CCG will take delivery of three offshore skimmers and five high-speed sweep systems in 2022-23. The sweep systems will be used to recover oil in sheltered or calm waters and from inside small vessels, while the skimmers will be used in unsheltered waters. New offshore booms (floating barriers that can be rapidly deployed to contain or redirect oil spills) will also be delivered to the East and West coasts as well the St. Lawrence River in 2022-23. Under the Oceans Protection Plan, the Government of Canada is ensuring CCG has the equipment it needs to respond to environmental pollution quickly and effectively.



### Vessels of concern

CCG developed a national inventory of wrecked, abandoned, and hazardous vessels. Vessels are prioritized using a risk and evidenced-based approach to inform the mitigation strategy for high-risk, hazardous vessels that threaten the environment, public health and safety, Indigenous and other coastal communities, and local industries. Operations may include technical risk assessments, pollution mitigation measures, or deconstruction and recycling of the vessels. This work will support other government departments as Canada takes proactive action on hazardous vessels and on the preservation and restoration of marine ecosystems.

### Greening government

In support of the 2021 Speech from the Throne's priority of bolder climate action, as well as the [Greening Government Strategy's](#)<sup>iv</sup> goal of net-zero emissions from the Government of Canada's operations by 2050, CCG will develop its first operational fleet decarbonization plan. This plan, which will be drafted in 2022-23 and in place by the end of 2023-24, will outline how CCG will reduce greenhouse gas emissions from its operations in line with the overall net-zero 2050 target. This will include the use of more environmentally-friendly technologies and low-carbon fuels for its fleet when available, affordable, and operationally feasible.

While preparing and implementing this plan, CCG will evaluate other opportunities to reduce emissions and environmental impacts. This will include consideration of operational efficiencies, research, innovation, and procurement options for its fleet and fuel. In all of this work, CCG will seek opportunities to transition to net-zero carbon and climate-resilient operations, and to reduce environmental impacts on water and biodiversity.

### DID YOU KNOW?



In 2020, CCG hired Canadian Geographic Education, a division of the Royal Canadian Geographical Society, to run an Adopt a Ship pilot project that paired two CCG vessels with two elementary school classes. Students were able to track their vessel and communicate directly with the crew throughout the project. The current phase of the project builds on that success by involving four schools and collaborating with DFO to add increased focus on science.

## Personnel

CCG personnel perform demanding tasks, often under challenging conditions where the consequence of error may be loss of human life or significant environmental impact. They therefore require ongoing specialized training, primarily delivered by the CCG College (“the College”). Based on a recent organizational review and strategic plan, and supported by the creation of 76 additional positions at the College, CCG will introduce a number of improvements to its training, as outlined below.

- College Regional Learning Centres will be established in each of CCG’s regions (Arctic, Atlantic, Central, and Western) to increase training opportunities and reduce travel requirements for personnel from coast to coast to coast. Equipment for the new CCG Headquarters in Ottawa and for Western Region will be installed in 2022-23. Additional sites in Central and Arctic Regions are planned for Winter of 2023.
- The College will install a new engine training simulator, consisting of three different engines, to teach personnel to operate and maintain these engines in a controlled environment closely resembling the engine room of a CCG vessel. The College is installing a Wartsila Engine and two MTU-type Diesel Engines to simulate in a controlled environment the engine room found on current and future CCG vessels. The College is only one of two training institutions in the world with a running Wartsila engine trainer and the equipment to support its use in training. Associated curriculum will be developed and training will be provided to our existing and future Fleet Marine Engineers. This training will greatly enhance the knowledge of our Fleet Marine Engineering Officers, which will result in lower maintenance costs and an increase in the reliability of our CCG fleet of vessels.
- In spring 2022, a new vessel traffic service simulator will be installed that will offer more flexibility to adjust and create complex simulations and integrate real-life elements when training Marine Communications and Traffic Services (MCTS) personnel. MCTS personnel provide safety and navigation services such as broadcasting maritime safety information, screening vessels prior to entry into Canadian waters, and managing marine traffic in designated waterways.

## Gender-based analysis plus



In line with the [2021 Speech from the Throne’s](#)<sup>vi</sup> priority of standing up for diversity and inclusion, Gender-based Analysis Plus considerations will be increasingly integrated in the design of new CCG vessels. A dedicated engineering team has been established to ensure innovative ship designs are incorporated into the fleet planning process with the aim of enabling a diverse workforce within a user-friendly environment. This includes implementing, wherever possible, a barrier-free physical work environment to accommodate operators of different physical needs and requirements (for example, sightlines in the newest class of SAR vessels were re-assessed as part of accessibility and ergonomics improvements). CCG is also improving internal policies to encourage and celebrate a more diverse workforce (for example, adopting a more multicultural food menu and having dedicated space on ships for religious or cultural practices). The goal of these actions is an increasingly inclusive and diverse workforce that fully represents and better serves all Canadians. In 2022-23, CCG will continue, where feasible, to incorporate GBA Plus considerations into the design and engineering of its new vessels.

Several programs or projects delivered by CCG's SAR program primarily benefit the remote Indigenous communities that are funded to build capacity through training and exercising, or to establish or enhance their on-water search and rescue capabilities as members of the CCG Auxiliary. As funding these programs helps increase the capacity of those Indigenous communities to respond to on water incidents, it improves marine safety at a local level and benefits mariners operating in waters near these communities. Additionally, the program monitors whether its funding is received by remote and under-serviced or under-resourced areas where there are gaps in search and rescue and marine emergency response services.

### **United Nations' (UN) 2030 Agenda for Sustainable Development and the UN Sustainable Development Goals**

For additional information on how the Department is advancing the UN Sustainable Development Goals, please refer to DFO's [2020-2023 Departmental Sustainable Development Strategy](#)<sup>lvii</sup>.

### **Experimentation**




Between 2022-23 and 2024-25, CCG will replace its human resources and ship assignment system for seagoing employees. The business logic to perform this work consists of different systems on ships, at regional offices, and at headquarters to conduct day-to-day business as well as provide vital information at the strategic level. To determine the correct replacement system, CCG will compare three commercially-available options to find the system best able to track crewing, time, labour, training, and certification information and automate crewing decisions. To perform this review, these three systems will be placed in test environments to conduct experiments in order to assess their ability to interoperate with other dependent systems, as well as to satisfy business needs and reduce the resource burden to support the fleet. The goal is to use this information and automated decision-making to improve the delivery of services by CCG's fleet.

### **Key risk(s)**

Key risks under this core responsibility include increasing operational challenges due to the aging fleet and limited resources to train and equip personnel to operate vessels safely and efficiently. The Department has developed risk mitigation plans that aim to reinvigorate existing vessels through the Vessel Life Extension program, while also procuring new vessels to continue providing essential services to Canadians. As well, the Department is actively working towards modifying its training and learning resources (e.g. new engine training and vessel traffic simulator) to ensure that staff are properly trained to perform their duties safely and effectively across Canada. DFO will continue to monitor these risks and take action to address these risks.

## Planned results for Marine operations and response

The following table shows, for Marine operations and response, the planned results, the result indicators, the targets and the target dates for 2022-23, and the actual results for the three most recent fiscal years for which actual results are available.

	Departmental result	Departmental result indicator	Target	Actual results
	Canadian Coast Guard has the capability to respond to on-water incidents	Percentage of responses to environmental incidents that meet established standards	Exactly 100% by March 31, 2023	2018-19: 100% 2019-20: 100% 2020-21: 100%
		Percentage of search and rescue responses that meet the established standards	At least 99% by March 31, 2023	2018-19: 98% 2019-20: 98% 2020-21: 99%
	Canada's Civilian fleet has the capability to meet established service standards for clients	Operational days delivered vs. operational days planned	At least 90% by March 31, 2023	2018-19: 87% 2019-20: 97% 2020-21: 96%
		Percentage of operational days lost due to crewing and logistic issues	At most 3% by March 31, 2023	2018-19: 0.7% 2019-20: 0.6% 2020-21: 1%
		Percentage of operational days lost due to unplanned maintenance	At most 3% by March 31, 2023	2018-19: 3.4% 2019-20: 4.4% <sup>24</sup> 2020-21: 3%
	Enhanced relationships with, involvement of, and outcomes for Indigenous people	Number of agreements / arrangements involving Indigenous groups	Target will be established 2023-24	2018-19: N/A 2019-20: N/A 2020-21: Data not available
		Number of Indigenous people trained through agreements / arrangements	At least 24 by March 31, 2023	2018-19: N/A 2019-20: N/A 2020-21: Data not available

Note: N/A indicates that the performance indicator was not in effect at that time, and therefore, historical data may not be available. In cases where historical data is available, past results are presented in the "Actual results" column.

## Planned budgetary spending for Marine operations and response


The following table shows, for Marine operations and response, budgetary spending for 2022-23, as well as planned spending for that year and for each of the next two fiscal years.

	2022-23 budgetary spending (as indicated in Main Estimates)	2022-23 planned spending	2023-24 planned spending	2024-25 planned spending
	1,402,567,112	1,402,567,112	1,220,996,992	1,026,715,592

<sup>24</sup> Until newer vessels come into service and older vessels can be retired, exceeding this target is expected to continue for the immediate future.

### Planned human resources for Marine operations and response

The following table shows, in full-time equivalents, the human resources the department will need to fulfill this core responsibility for 2022-23 and for each of the next two fiscal years.

	2022-23 planned full-time equivalents	2023-24 planned full-time equivalents	2024-25 planned full-time equivalents
	4,177	4,003	4,009

The financial, human resources and performance information for the Department of Fisheries and Oceans' Program Inventory is available on [GC InfoBase](#)<sup>lviii</sup>.

## Internal services: planned results

### Description

Internal Services are the services that are provided within a department so that it can meet its corporate obligations and deliver its programs. There are 10 categories of internal services: Management and Oversight Services; Communications Services; Legal Services; Human Resources Management Services; Financial Management Services; Information Management Services; Information Technology Services; Real Property Management Services; Materiel Management Services; and Acquisition Management Services.



### Planning highlights

The Department's Internal Services support all programs and activities to ensure that they have the resources needed to provide effective services to Canadians. This includes a complement of staff that is well-trained, whose mental and physical wellbeing are supported, whose diversity is celebrated, and who have the strong information technology tools needed for their work. Internal Services also ensure that the Department's work is done in a fiscally responsible manner that effectively manages Canadian taxpayers' dollars, and in a sustainable manner that protects Canada's environment.

#### Reconciliation Strategy

In support of the 2021 [Speech from the Throne's](#)<sup>lix</sup> priority of moving faster on the path to reconciliation, the Department will continue to implement the DFO-Coast Guard [Reconciliation Strategy](#)<sup>lx</sup> (the Strategy), a roadmap for advancing reconciliation and a framework for rethinking how to accelerate the Department's efforts. Teams across the Department have developed reconciliation action plans that detail measurable steps to advance reconciliation. Going forward, work will continue to improve and refine accountability measures to measure progress, assess challenges and barriers, and deepen the Department's understanding of reconciliation. The Strategy will also serve as an important guidepost and tool for advancing departmental reconciliation efforts in line with [The United Nations Declaration on the Rights on Indigenous Peoples Act](#)<sup>lxi</sup>. The Strategy is intended to evolve over time, adapting to challenges and building on successes, and will evolve in step with the Government of Canada's implementation of the Declaration. The Strategy and the corresponding reconciliation action plans will help the Department strengthen Indigenous-Crown relationships, advance self-determination, and reduce socio-economic gaps.

### Greening government and climate resiliency

DFO is preparing for the possibility that climate change may damage its sites or trigger new infrastructure needs. The Department will develop a comprehensive climate resiliency plan for its key real property assets (such as buildings), which will include a targeted schedule to conduct climate risk and vulnerability assessments for these assets. The goals of this plan are to mitigate health and safety risks and to ensure DFO can continue to offer its core programs and services to Canadians with little or no climate-related closures of its key assets.

In support of the Greening Government Strategy and the Federal Sustainable Development Strategy, DFO will implement energy efficiency infrastructure improvements and conduct an increased number of energy efficiency studies to better plan future improvements. Examples of work planned for 2022-23 include improving building insulation to reduce heat loss and the installation of solar panels and solar flowers (solar panels that track the sun, which increases their efficiency by 40 per cent) to help reduce energy consumption.

To reduce ecological and human health risks, the Federal Contaminated Sites Action Plan (FCSAP) aims to either close or implement a risk management regime at 95 per cent of all existing Federal Contaminated Sites by 2035. A contaminated site is one at which substances occur at concentrations that exceed levels specified in policies and regulations or that are above background levels and either pose or are likely to pose a hazard to human health or the environment. In 2022-23, the Department will continue this important work to safeguard and improve the environment, health, and safety of Canadian communities, wildlife, and ecosystems. Specifically, it will implement assessment activities at 410 suspected contaminated sites in order to identify, evaluate, and quantify risks to the environment and to human health, and undertake remediation and risk management activities at 181 contaminated sites to mitigate the risks they pose.

### Diversity and inclusion

In support of the Government of Canada's commitment to increase diversity and foster inclusion within the public service and further to the Clerk of the Privy Council's October 2020 [Call to Action on Anti-racism, Equity, and Inclusion in the Federal Public Service](#)<sup>bxi</sup> seeking greater diversity amongst our leadership and increased actions to improve equity and inclusion, the Department will implement targeted measures to recruit and retain employees who identify as Indigenous, persons with disabilities, visible minorities, and women in non-traditional occupations. The following are the Department's key plans for 2022-23:

- identify and eliminate barriers within the employee recruitment process
- develop the Department's 2022-2025 Employment Equity, Diversity, and Inclusion Action Plan by the fall of 2022

**DID YOU KNOW?**



The Government of Canada will transition to net-zero carbon and climate-resilient operations, while also reducing environmental impacts beyond carbon, including on waste, water and biodiversity. Led by the Centre for Greening Government of the Treasury Board of Canada Secretariat, the Government of Canada will ensure that Canada is a global leader in government operations that are net-zero, resilient and green.



- create an inclusive public service where women receive equal pay for work of equal value by continuing to implement the *Pay Equity Act*, which came into force in August 2021
- use the Department's new Accessibility Action Plan to improve recruitment and retention of persons with disabilities by identifying, removing, and preventing barriers to accessibility

Additionally, the Department's communications team will continue to use inclusive language and images in both external and internal communications to promote equity and reflect the diversity of Canadian society. The goal is to build and maintain a safe, diverse, equitable, and welcoming environment for all employees and the public they serve.

### Data and digital innovation

As a scientific, regulatory, and operational department, DFO acquires significant amounts of data through program activities and exchanges with external organizations. Decades of investment in long-term monitoring, modelling, field surveys, and high-tech laboratory research have resulted in large volumes of irreplaceable data that are foundational to understanding Canada's oceans and freshwater environments, how they are changing over time, and the environmental and socioeconomic impacts on coastal communities and the livelihoods of Canadians. The Department makes constant use of data to manage resources, deliver programs, and make research, policy, regulatory, investment, and operational decisions.

With the appointment of a new Chief Digital Officer (CDO) at DFO comes the task of establishing a solid foundation for the Department's digital evolution. The integration of the core elements of service, data, and technology will enhance the efficiency and effectiveness of the Department's offerings to Canadians and mariners.

The CDO's vision for a digital strategy will lead to the transformation of DFO's current business model to match the digital expectations of stakeholders. The strategy will focus on improving services to Canadians, addressing technical debt<sup>25</sup> remediation, and making strategic digital assets available across the Department, all while ensuring alignment with the [Government of Canada Directive of Service and Digital](#)<sup>lxiii</sup> and the [Government of Canada Digital Standards](#)<sup>lxiv</sup>.

DFO's Data Strategy, launched in 2021, was designed to improve the availability, management, and use of data across the Department. One of its goals is to make all key data assets available across the Department by 2023-24. In addition to making open data more readily available to the public and other stakeholders, modernizing the management of data will help the Department improve its decision-making and delivery of services to Canadians.

The rapid shift to remote work brought on by the COVID-19 pandemic has brought challenges, but also opportunities to improve the Department's management of information. In 2022-23, DFO will update its information security capabilities to ensure that information entrusted to the Department continues to be appropriately managed and protected. This will include continuing to invest in digital and cloud-based solutions.

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<sup>25</sup>The term "technical debt" refers to long-term information technology work that builds up while an organization addresses pressing short- and medium-term needs.

The Department will also continue to modernize the *Access to Information Act*<sup>lxv</sup> and *Privacy Act*<sup>lxvi</sup> (collectively referred to as ATIP) request process. Building on its recent shift from a paper-based process to an electronic process, DFO will adopt more up-to-date, reliable ATIP software to ensure continued effective and timely responses to ATIP requests.

### Science facilities

The Government of Canada's *Laboratories Canada*<sup>lxvii</sup> strategy is creating world class, innovative and collaborative science research centres across the nation. The Moncton-based Atlantic Science Enterprise Centre (ASEC) will become one of those multi-disciplinary science facilities delivering on the department's research priorities and provides an example of the work on science facilities that DFO plans to complete in the next several years. While ASEC is being modernized and expanded, the existing laboratory facilities at the St. Andrews Biological Station (SABS) will be upgraded to include a climate change aqualab, a laboratory designed for live-animal research that will support the ASEC science plan and act as a satellite site for ASEC. Upgrading an existing laboratory at SABS will provide ASEC with aquatic research capacity sooner and will reduce the overall cost of construction at the Moncton ASEC site. Scientific data about aquatic environments, fish, marine mammals, climate change, and hydrography is an essential component of DFO's work and decision-making. Modernized, multi-purpose facilities will enable Canada's federal researchers and scientists to collaborate and deliver cutting-edge, world-class science.

### Financial and asset management

Accrual budgeting will enable the management of DFO's portfolio of capital assets according to their lifecycle (asset useful life), as opposed to a project-based approach that focuses on shorter (e.g. five-year) periods. Subject to Parliamentary approval, DFO will continue to work towards becoming the third federal department to implement accrual budgeting starting in 2022-23 for a strategic, long-term (20-year horizon) approach to planning capital investments. This is the result of a two-year review and analysis of the Department's capital assets and the development of a robust governance framework, which included consulting two independent accounting firms. The long-term view provided by accrual budgeting will increase DFO's flexibility to better meet Government of Canada priorities, such as promoting reconciliation with Indigenous peoples and reducing greenhouse gas emissions from the Department's buildings and fleet. This transition is also expected to improve both the governance and stewardship of public funds and the maintenance and replacement of capital assets that are crucial to achieving results for Canadians, such as laboratories, harbours, scientific equipment, ships, and aids to navigation.

The transition to accrual accounting will continue to be supported by the cost estimating centre of expertise within the Department. The centralization of this work under a team of experts has significantly improve the consistency of cost estimation and the identification of financial risks; two key elements that inform DFO's decision-making and prudent stewardship of resources. The consistent use of best practices to clearly articulate financial risks and the full financial impact of future investment decisions will further improve the Department's ability to ensure value for money for all Canadians through enhanced early planning.

As part of its careful stewardship of public funds, the Department will continue to effectively manage the Real Property portfolio according to the principles of right-sizing and exploring further opportunities in light of the shift to remote and hybrid working (working remotely for part of the week) that has been accelerated by the COVID-19 pandemic.

## Gender-based analysis plus



To improve the use of gender-based analysis plus (GBA Plus) in policy development, the Department will introduce GBA Plus training for its key policy staff, as well as continue to participate in an annual Women and Gender Equality GBA Plus implementation survey to increase awareness and identify challenges and opportunities. Increased and better use of GBA Plus will improve the information available for decision-making, help minimize unintended gender-differentiated impacts of the Department's activities, and ensure more inclusive outcomes for Canadians.

The Department will implement guidance to more consistently and effectively integrate GBA Plus considerations into its programs' tracking and reporting of the results they achieve for Canadians. This will guide the systematic review and consideration of how best to measure the outcomes and impacts of programs on different and intersecting identity groups. The ensuing enhanced understanding of the results the Department achieves for different and intersecting identity groups will ultimately lead to better outcomes for Canadians of all identities.

The Career Progression Management Framework for Federal Researchers (Framework) provides a template for career advancement in the Government of Canada research community and obliges science departments to track researcher outputs and other contributions to departmental outcomes. In 2022-23, the Department will conduct a GBA Plus review of the Department's application of the Framework to identify systemic barriers in the framework and to improve gender equity and inclusivity for its scientific researchers.

## United Nations' (UN) 2030 Agenda for Sustainable Development and the UN Sustainable Development Goals

For additional information on how the Department is advancing the UN Sustainable Development Goals, please refer to DFO's [2020-2023 Departmental Sustainable Development Strategy](#)<sup>lxviii</sup>.

## Experimentation



The Department will continue to support experimentation through the annual Results Fund process, which funds promising pilot projects and related innovations and experiments. Proposals from across the Department are rigorously assessed against a set of criteria to select those that best demonstrate innovation, experimentation, an acceptable level of risk, and the potential to achieve results. For example, one project sought to test new solutions for harnessing the kinetic energy of marine vessels with the goal of reducing energy consumption and reliance on externally-sourced energy. This targeted funding allows the Department to advance initiatives that experiment with innovative ideas to achieve results for Canadians.

## Key risk(s)

The Department may not have sufficient human resources capacity and IT supports to deliver the priorities and results under this core responsibility. The Department is aiming to create various pools of potential candidates to draw from to support service deliveries. As well, the Department will continue to develop new tools and processes for the staff to assist gradual adaptation and transition to new technologies. DFO will monitor these risks continuously and adjust its risk mitigation strategies to respond accordingly.


### Planned budgetary spending for Internal services

The following table shows, for internal services, budgetary spending for 2022-23, as well as planned spending for that year and for each of the next two fiscal years.

	<b>2022-23 budgetary spending (as indicated in Main Estimates)</b>	<b>2022-23 planned spending</b>	<b>2023-24 planned spending</b>	<b>2024-25 planned spending</b>
	568,452,094	568,452,094	541,492,256	561,174,728

### Planned human resources for Internal services

The following table shows, in full-time equivalents, the human resources the Department will need to carry out its internal services for 2022-23 and for each of the next two fiscal years.

	<b>2022-23 planned full-time equivalents</b>	<b>2023-24 planned full-time equivalents</b>	<b>2024-25 planned full-time equivalents</b>
	2,266	2,235	2,241

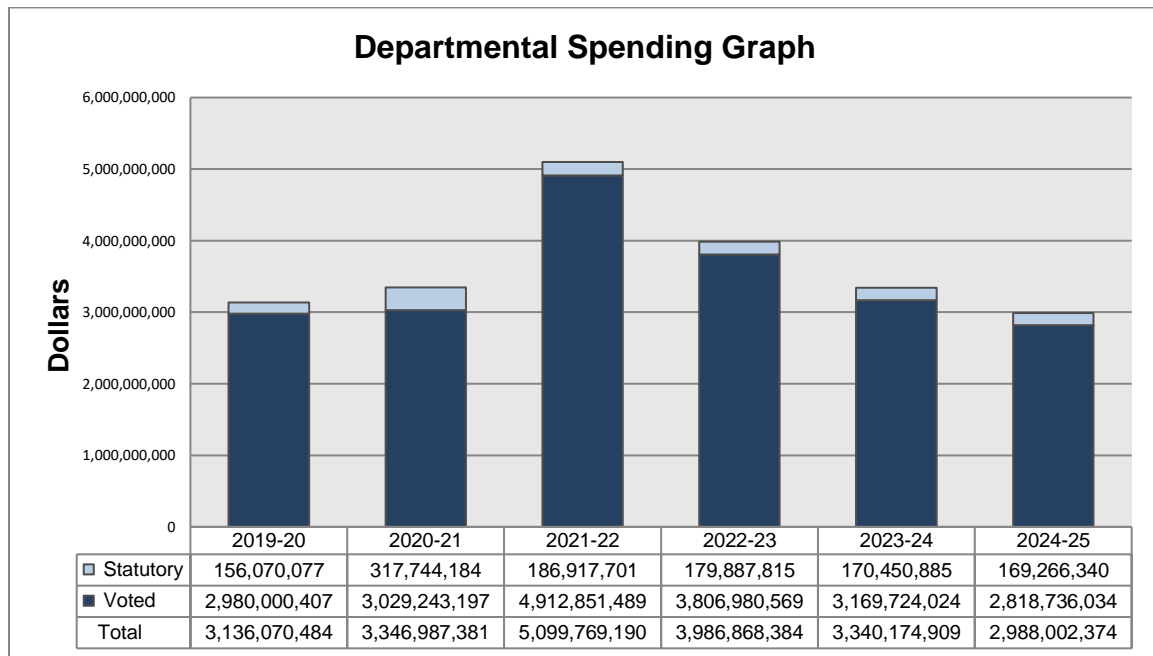
## Planned spending and human resources

This section provides an overview of the Department's planned spending and human resources for the next three fiscal years, and compares planned spending for 2022-23 with actual spending for the current and the previous year.

### Planned spending

#### Departmental spending 2019-20 to 2024-25

The following graph presents planned spending (voted and statutory expenditures) over time.



The variance between the 2021-22 forecast spending and the 2022-23 through 2024-25 planned spending is mainly attributable to Supplementary Estimates and operating and capital budget carry forwards, which have been included in the 2021-22 forecast spending but are not yet known for the 2022-23 through 2024-25 fiscal years.

#### Spending analysis

The \$211 million increase in expenditures from 2019-20 to 2020-21 is primarily related to the Fish Harvesters Benefit and Grant Program, enacted pursuant to the *Public Health Events of National Concern Payments Act* as well as spending related to the Big Bar landslide project.

The \$1,754 million increase from the 2020-21 expenditures to the 2021-22 planned spending is primarily related to incremental funding related to:

- Indigenous programs
- renewing the CCG fleet
- the Trans Mountain Expansion Project
- the Small Craft Harbours Program

### Spending plan for 2022-23 to 2024-25

The decreasing trend is attributable to planned changes in the funding profile as projects near and meet their completion.

The \$1,114 million decrease in planned spending from 2021-22 to 2022-23 is primarily related to planned changes:

- to Indigenous programs as they continue to progress
- in the CCG fleet renewal as the programs continue to progress
- in funding to support fish harvesters affected by COVID-19 as the program reaches completion
- in funding for the Oceans Protection Plan as the program continues to progress

The \$647 million decrease in planned spending from 2022-23 to 2023-24 is primarily related to planned changes:

- to the CCG fleet renewal as the programs continue to progress
- in funding for the Small Craft Harbours Program
- to Indigenous programs as they continue to progress
- in funding to modernize the *Fisheries Act* as the program reaches completion
- in funding for the Oceans Protection Plan as the program continues to progress

The \$352 million decrease in planned spending from 2023-24 to 2024-25 is primarily related to planned changes:

- in funding for the CCG fleet renewal as the programs continue to progress
- in funding related to Fish Funds
- in funding for the Trans Mountain Expansion project as the project continues to progress

### Budgetary planning summary for core Responsibilities and internal services (dollars)

The following table presents information on spending for each of DFO's core responsibilities and its internal services for 2022-23 and other relevant fiscal years.

Core responsibilities and internal services	2019-20 expenditures	2020-21 expenditures	2021-22 forecast spending	2022-23 budgetary spending (as indicated in Main Estimates)	2022-23 planned spending	2023-24 planned spending	2024-25 planned spending
Fisheries	870,305,003	988,392,191	1,908,386,712	1,276,607,880	1,276,607,880	1,013,209,416	865,365,474
Aquatic Ecosystems	311,606,616	354,805,497	465,836,776	391,884,341	391,884,341	282,991,537	254,039,126
Marine Navigation	332,887,078	285,902,876	351,137,247	347,356,957	347,356,957	281,484,708	280,707,454
Marine Operations and Response	1,074,073,985	1,160,540,295	1,740,449,701	1,402,567,112	1,402,567,112	1,220,996,992	1,026,715,592
<b>Subtotal</b>	<b>2,588,872,682</b>	<b>2,789,640,859</b>	<b>4,465,810,436</b>	<b>3,418,416,290</b>	<b>3,418,416,290</b>	<b>2,798,682,653</b>	<b>2,426,827,646</b>
Internal Services	547,197,802	557,346,522	633,958,754	568,452,094	568,452,094	541,492,256	561,174,728
<b>Total</b>	<b>3,136,070,484</b>	<b>3,346,987,381</b>	<b>5,099,769,190</b>	<b>3,986,868,384</b>	<b>3,986,868,384</b>	<b>3,340,174,909</b>	<b>2,988,002,374</b>

## 2022-23 budgetary gross and net planned spending summary (dollars)

The following table reconciles gross planned spending with net planned spending for 2022-23.

Core responsibilities and internal services	2022-23 gross planned spending	2022-23 planned revenues netted against spending	2022-23 planned net spending
Fisheries	1,276,607,880	-	1,276,607,880
Aquatic Ecosystems	391,884,341	-	391,884,341
Marine Navigation	387,367,957	(40,011,000)	347,356,957
Marine Operations and Response	1,402,567,112	-	1,402,567,112
<b>Subtotal</b>	<b>3,458,427,290</b>	<b>(40,011,000)</b>	<b>3,418,416,290</b>
Internal Services	568,452,094	-	568,452,094
<b>Grand Total</b>	<b>4,026,879,384</b>	<b>(40,011,000)</b>	<b>3,986,868,384</b>

For certain services, CCG collects service fees to ensure that, where appropriate, the entire cost of delivering the service is not borne by taxpayers. Fees for icebreaking, marine navigation, and dredging support the safe navigation of Canadian waters.

### Planned human resources

The following table presents information on human resources, in full-time equivalents (FTEs), for each of DFO's core responsibilities and its internal services for 2022-23 and the other relevant years.

### Human resources planning summary for core responsibilities and internal services

Core responsibilities and internal services	2019-20 actual FTEs	2020-21 actual FTEs	2021-22 forecast FTEs	2022-23 planned FTEs	2023-24 planned FTEs	2024-25 planned FTEs
Fisheries	3,072	3,245	3,520	3,644	3,612	3,562
Aquatic Ecosystems	1,490	1,607	1,796	1,762	1,279	1,233
Marine Navigation	1,940	1,826	2,045	1,964	1,958	1,949
Marine Operations and Response	4,118	4,348	4,182	4,177	4,003	4,009
<b>Subtotal</b>	<b>10,620</b>	<b>11,026</b>	<b>11,543</b>	<b>11,547</b>	<b>10,852</b>	<b>10,753</b>
Internal Services	2,080	2,231	2,186	2,266	2,235	2,241
<b>Total</b>	<b>12,700</b>	<b>13,257</b>	<b>13,729</b>	<b>13,813</b>	<b>13,087</b>	<b>12,994</b>

Note: Because of rounding, figures may not add to the totals shown.

### Full-time equivalents (FTE) analysis

- The 557 FTE increase between 2019-20 and 2020-21 is primarily attributed to recruitment under the Oceans Protection Plan and the hiring of compensation staff to address pay issues.
- The 472 FTE increase between 2020-21 and 2021-22 is primarily attributed to additional funding related to Indigenous programs and the Trans Mountain Expansion project.



### FTE plan for 2021-22 to 2024-25

The slight increasing trend followed by a decreasing trend is attributable to planned changes in the funding profile as projects near and meet their completion.

- The 83 FTE increase between 2021-22 and 2022-23 is primarily attributed to the CCG fleet renewal program and the Oceans Protection Program.
- The 725 FTE decrease between 2022-23 and 2023-24 is primarily attributed to sunsetting<sup>26</sup> programs across the department, specifically the *Fisheries Act*, Nature Legacy, the CCG Fleet Renewal, and Small Craft Harbours programs.
- The 91 FTE decrease between 2023-24 and 2024-25 is primarily attributed to planned reductions in funding to modernize the *Fisheries Act* and Nature Legacy programs, and additional reductions in funding across other various programs.

### Estimates by vote

Information on DFO's organizational appropriations is available in the [2022-23 Main Estimates](#)<sup>lxix</sup>.

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<sup>26</sup> A sunset program is a time limited program that does not have an ongoing funding and policy authority. When the program is set to expire, a decision must be made whether to continue the program.

## Future-oriented condensed statement of operations

The future-oriented condensed statement of operations provides an overview of DFO's operations for 2021-22 to 2022-23.

The forecast and planned amounts in this statement of operations were prepared on an accrual basis. The forecast and planned amounts presented in other sections of the Departmental Plan were prepared on an expenditure basis. Amounts may therefore differ.

A more detailed future-oriented statement of operations and associated notes, including a reconciliation of the net cost of operations with the requested authorities, are available on [Fisheries and Oceans Canada's website](#)<sup>lxx</sup>.

## Future-orientated condensed statement of operations for the year ending March 31, 2023 (dollars)

Financial information	2021-22 forecast results	2022-23 planned results	Difference (2022-23 planned results minus 2021-22 forecast results)
Total expenses	3,839,236,162	3,246,714,570	(592,521,592)
Total revenues	40,011,000	40,011,000	0
Net cost of operations before government funding and transfers	<b>3,799,225,162</b>	<b>3,206,703,570</b>	<b>(592,521,592)</b>

The Net Cost of Operations in 2022-23 is projected to be \$3,206.7 million, a decrease of \$592.5 million compared to \$3,799.2 million in 2021-22. This decrease is mainly attributed to an overall decrease in authorities available for spending (excluding Capital vote) of \$887.0 million (\$2,745.5 million in 2022-23 compared to \$3,632.5 million in 2021-22) and a net increase of \$294.5 million in the total estimates for items not affecting authorities, such as amortization on capital assets and contingent liabilities offset by a decrease in the estimated vacation pay, compensatory leave and employee future benefits.

Total revenues are projected to remain stable at \$40 million.

Authorities available for spending in 2022-23 do not include items such as Supplementary Estimates and carry forwards.



## Corporate information

### Organizational profile

**Appropriate minister:**

The Honourable Joyce Murray, P.C., M.P.

**Institutional head:**

Timothy Sargent, Deputy Minister

**Ministerial portfolio:**

Fisheries and Oceans Canada

**Enabling instruments:**

- *Oceans Act*<sup>lxxi</sup>
- *Fisheries Act*<sup>lxxii</sup>
- *Species at Risk Act*<sup>lxxiii</sup>
- *Coastal Fisheries Protection Act*<sup>lxxiv</sup>
- *Fishing and Recreational Harbours Act*<sup>lxxv</sup>
- *Canada Shipping Act, 2001*<sup>lxxvi</sup> (Transport Canada-led)
- *Wrecked, Abandoned or Hazardous Vessels Act*<sup>lxxvii</sup> (Transport Canada-led)

**Year of incorporation / commencement:**

1979

**Raison d'être, mandate and role: who we are and what we do**

Information on DFO's raison d'être, mandate and role is available on [Fisheries and Oceans Canada's website](#)<sup>lxxviii</sup>.

Information on the Department's mandate letter commitments is available in the [Minister's mandate letter](#)<sup>lxxix</sup>.

**Operating context**

Information on the operating context is available on the [Fisheries and Oceans Canada website](#)<sup>lxxx</sup>.

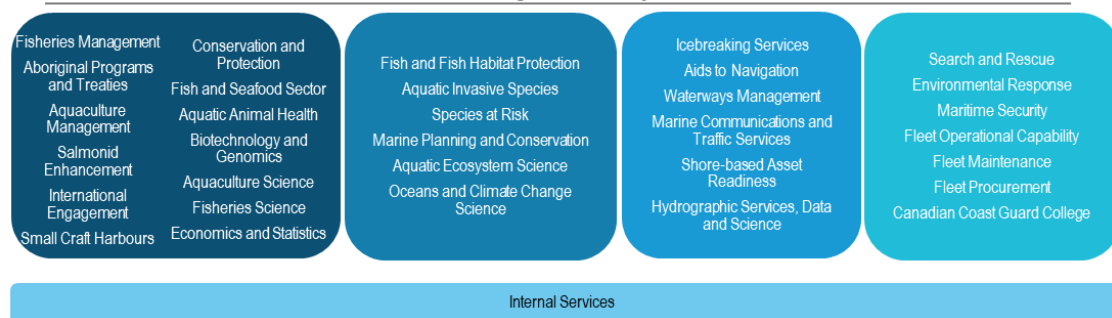
## Reporting framework

DFO's approved Departmental Results Framework and Program Inventory for 2022-23 are as follows.

### Departmental Results Framework



### Program Inventory



## Supporting information on the program inventory

Supporting information on planned expenditures, human resources, and results related to DFO's Program Inventory is available on [GC InfoBase](#)<sup>lxxxii</sup>.

## Supplementary information tables

The following supplementary information tables are available on [DFO's website](#)<sup>lxxxiii</sup>.

- Departmental Sustainable Development Strategy
- Details on transfer payment programs
- Gender-based analysis plus
- Horizontal initiatives
- Up-front multi-year funding

## Federal tax expenditures

DFO's Departmental Plan does not include information on tax expenditures.

Tax expenditures are the responsibility of the Minister of Finance. The Department of Finance Canada publishes cost estimates and projections for government-wide tax expenditures each year in the [Report on Federal Tax Expenditures](#)<sup>lxxxiii</sup>. This report provides detailed information on tax expenditures, including objectives, historical background and references to related federal spending programs, as well as evaluations, research papers and gender-based analysis.

## Organizational contact information

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## Appendix: definitions

**appropriation (crédit)**

Any authority of Parliament to pay money out of the Consolidated Revenue Fund.

**budgetary expenditures (dépenses budgétaires)**

Operating and capital expenditures; transfer payments to other levels of government, organizations or individuals; and payments to Crown corporations.

**core responsibility (responsabilité essentielle)**

An enduring function or role performed by a department. The intentions of the department with respect to a core responsibility are reflected in one or more related departmental results that the department seeks to contribute to or influence.

**Departmental Plan (plan ministériel)**

A document that sets out a department's priorities, programs, expected results and associated resource requirements, covering a 3-year period beginning with the year indicated in the title of the report. Departmental Plans are tabled in Parliament each spring.

**departmental result (résultat ministériel)**

A change that a department seeks to influence. A departmental result is often outside departments' immediate control, but it should be influenced by program-level outcomes.

**departmental result indicator (indicateur de résultat ministériel)**

A factor or variable that provides a valid and reliable means to measure or describe progress on a departmental result.

**departmental results framework (cadre ministériel des résultats)**

A framework that consists of the department's core responsibilities, departmental results and departmental result indicators.

**Departmental Results Report (rapport sur les résultats ministériels)**

A report on a department's actual performance in a fiscal year against its plans, priorities and expected results set out in its Departmental Plan for that year. Departmental Results Reports are usually tabled in Parliament each fall.

**experimentation (expérimentation)**

The conducting of activities that explore, test and compare the effects and impacts of policies and interventions in order to inform decision-making, and improve outcomes for Canadians. Experimentation is related to, but distinct from, innovation. Innovation is the trying of something new, experimentation involves a rigorous comparison of results. For example, introducing a new mobile application to communicate with Canadians can be an innovation; systematically testing the new application and comparing it against an existing website or other tools to see which one reaches more people, is experimentation.

**full-time equivalent (équivalent temps plein)**

A measure of the extent to which an employee represents a full person-year charge against a departmental budget. Full-time equivalents are calculated as a ratio of assigned hours of work to scheduled hours of work. Scheduled hours of work are set out in collective agreements.

**gender-based analysis plus (GBA+) (analyse comparative entre les sexes plus [ACS+])**

An analytical tool used to support the development of responsive and inclusive policies, programs and other initiatives; and understand how factors such as sex, race, national and ethnic origin, Indigenous origin or identity, age, sexual orientation, socio-economic conditions, geography, culture and disability, impact experiences and outcomes, and can affect access to and experience of government programs.

**government-wide priorities (priorités pangouvernementales)**

For the purpose of the 2022-23 Departmental Plan, government-wide priorities are the high-level themes outlining the Government's agenda in the 2021 Speech from the Throne: **building a healthier today and tomorrow; growing a more resilient economy; bolder climate action; fighter harder for safer communities; standing up for diversity and inclusion; moving faster on the path to reconciliation and fighting for a secure, just, and equitable world.**

**horizontal initiative (initiative horizontale)**

An initiative in which two or more federal organizations are given funding to pursue a shared outcome, often linked to a government priority.

**non-budgetary expenditures (dépenses non budgétaires)**

Net outlays and receipts related to loans, investments and advances, which change the composition of the financial assets of the Government of Canada.

**performance (rendement)**

What an organization did with its resources to achieve its results, how well those results compare to what the organization intended to achieve, and how well lessons learned have been identified.

**plan (plan)**

The articulation of strategic choices, which provides information on how an organization intends to achieve its priorities and associated results. Generally a plan will explain the logic behind the strategies chosen and tend to focus on actions that lead up to the expected result.

**planned spending (dépenses prévues)**

For Departmental Plans and Departmental Results Reports, planned spending refers to those amounts presented in the Main Estimates.

A department is expected to be aware of the authorities that it has sought and received. The determination of planned spending is a departmental responsibility, and departments must be able to defend the expenditure and accrual numbers presented in their Departmental Plans and Departmental Results Reports.

**program (programme)**

Individual or groups of services, activities or combinations thereof that are managed together within a department and that focus on a specific set of outputs, outcomes or service levels.

**program inventory (répertoire des programmes)**

An inventory of a department's programs that describes how resources are organized to contribute to the department's core responsibilities and achieve its planned results.

**result (résultat)**

An external consequence attributed, in part, to an organization, policy, program or initiative. Results are not within the control of a single organization, policy, program or initiative; instead they are within the area of the organization's influence.

**statutory expenditures (dépenses législatives)**

Expenditures that Parliament has approved through legislation other than appropriation acts. The legislation sets out the purpose of the expenditures and the terms and conditions under which they may be made.

**target (cible)**

A measurable performance or success level that an organization, program or initiative plans to achieve within a specified time period. Targets can be either quantitative or qualitative.

**voted expenditures (dépenses votées)**

Expenditures that Parliament approves annually through an Appropriation Act. The vote wording becomes the governing conditions under which these expenditures may be made.



## Endnotes

- <sup>i</sup> Action Plan for the Renewal and Expansion of DFO's Indigenous Programs, <https://www.dfo-mpo.gc.ca/fisheries-peches/aboriginal-autochtones/action-plan-action/index-eng.html>
- <sup>ii</sup> Minister's mandate letter, <https://pm.gc.ca/en/mandate-letters/2021/12/16/minister-fisheries-oceans-and-canadian-coast-guard-mandate-letter>
- <sup>iii</sup> Blue Economy Strategy Engagement Paper, <https://www.dfo-mpo.gc.ca/about-notre-sujet/blue-economy-economie-bleue/engagement-paper-document-mobilisation/part1-eng.html>
- <sup>iv</sup> Pacific Salmon Strategy Initiative, <https://www.dfo-mpo.gc.ca/campaign-campagne/pss-ssp/index-eng.html>
- <sup>v</sup> Protecting Canada's endangered whales, <https://www.dfo-mpo.gc.ca/campaign-campagne/protectingwhales-protegerbaleines/index-eng.html>
- <sup>vi</sup> Sustainable Fisheries Solutions & Retrieval Support Contribution Program, <https://www.dfo-mpo.gc.ca/fisheries-peches/management-gestion/ghostgear-equipementfantome/program-programme/index-eng.html>
- <sup>vii</sup> Charlevoix blueprint for healthy oceans, seas and resilient coastal communities, [https://www.international.gc.ca/world-monde/international\\_relations\\_relations\\_internationales/g7/documents/2018-06-09-healthy\\_oceans-sante\\_oceans.aspx?lang=eng](https://www.international.gc.ca/world-monde/international_relations_relations_internationales/g7/documents/2018-06-09-healthy_oceans-sante_oceans.aspx?lang=eng)
- <sup>viii</sup> 2021 Speech from the Throne, <https://www.canada.ca/en/privy-council/campaigns/speech-throne/2021/speech-from-the-throne.html>
- <sup>ix</sup> Fisheries and Oceans – Aquaculture, <https://www.dfo-mpo.gc.ca/aquaculture/science-eng.html>
- <sup>x</sup> Evaluation of the Fisheries and Aquaculture Clean Technology Adoption Program (FACTAP), [https://www.dfo-mpo.gc.ca/ae-ve/evaluations/20-21/factap-patppa-eng.html#\\_Toc58851671](https://www.dfo-mpo.gc.ca/ae-ve/evaluations/20-21/factap-patppa-eng.html#_Toc58851671)
- <sup>xi</sup> Action Plan for the Renewal and Expansion of DFO's Indigenous Programs, <https://www.dfo-mpo.gc.ca/fisheries-peches/aboriginal-autochtones/action-plan-action/index-eng.html>
- <sup>xii</sup> Evaluation of the Indigenous Commercial Fisheries Programs, [https://www.dfo-mpo.gc.ca/ae-ve/evaluations/20-21/icfp-ppca-eng.html#\\_Toc67320531](https://www.dfo-mpo.gc.ca/ae-ve/evaluations/20-21/icfp-ppca-eng.html#_Toc67320531)
- <sup>xiii</sup> New protections for High Arctic to boost climate change resiliency and create opportunities for Inuit, <https://pm.gc.ca/en/news/news-releases/2019/08/01/new-protections-high-arctic-boost-climate-change-resiliency-and>
- <sup>xiv</sup> Canadian Extreme Water Level Adaptation Tool, <https://open.canada.ca/data/en/dataset/a3edf193-5c56-4b38-bcc5-c8708c60ce38>
- <sup>xv</sup> Global Ocean Science Report, <https://en.unesco.org/gosr>
- <sup>xvi</sup> DFO Departmental Sustainable Development Strategy 2020 to 2023, <https://www.dfo-mpo.gc.ca/sds-sdd/2020-2023/index-eng.html>
- <sup>xvii</sup> GC InfoBase, <https://www.tbs-sct.gc.ca/ems-sgd/edb-bdd/index-eng.html#start>
- <sup>xviii</sup> Minister's mandate letter, <https://pm.gc.ca/en/mandate-letters/2021/12/16/minister-fisheries-oceans-and-canadian-coast-guard-mandate-letter>
- <sup>xix</sup> Government of Canada making significant progress and investments to protect Canada's oceans, <https://www.canada.ca/en/fisheries-oceans/news/2021/07/government-of-canada-making-significant-progress-and-investments-to-protect-canadas-oceans.html>
- <sup>xx</sup> Other effective area-based conservation measures, <https://www.dfo-mpo.gc.ca/oceans/oecm-amcepz/refuges/index-eng.html>
- <sup>xxi</sup> Supporting Aboriginal Participation in Resource Development: The Role of Impact and Benefit Agreements, [https://lop.parl.ca/sites/PublicWebsite/default/en\\_CA/ResearchPublications/201529E](https://lop.parl.ca/sites/PublicWebsite/default/en_CA/ResearchPublications/201529E)
- <sup>xxii</sup> Protection Standards to better conserve our oceans, <https://www.dfo-mpo.gc.ca/oceans/mpa-zpm/standards-normes-eng.html>
- <sup>xxiii</sup> 5<sup>th</sup> International Marine Protected Areas Congress, <https://www.impac5.ca/?sfw=pass1644710611>
- <sup>xxiv</sup> The Federal Geospatial Platform, <https://www.nrcan.gc.ca/earth-sciences/geomatics/canadas-spatial-data-infrastructure/geospatial-communities-and-canadian-geosecretariat/federal-geospatial-platform/11031>

- <sup>xxv</sup> Mitigating the impacts of ocean noise, <https://www.dfo-mpo.gc.ca/oceans/noise-bruit/index-eng.html>
- <sup>xxvi</sup> Charlevoix blueprint for healthy oceans, seas and resilient coastal communities, [https://www.international.gc.ca/world-monde/international\\_relations-relations\\_internationales/g7/documents/2018-06-09-healthy\\_oceans-sante\\_oceans.aspx?lang=eng](https://www.international.gc.ca/world-monde/international_relations-relations_internationales/g7/documents/2018-06-09-healthy_oceans-sante_oceans.aspx?lang=eng)
- <sup>xxvii</sup> Evaluation of the Coastal Restoration Fund, <https://www.dfo-mpo.gc.ca/ae-ve/evaluations/20-21/crf-frc-eng.html>
- <sup>xxviii</sup> The Global Ocean Accounts Partnership, <https://www.oceanaccounts.org/>
- <sup>xxix</sup> Fisheries Act Registry, <https://www.dfo-mpo.gc.ca/pnw-ppe/registry-registre-eng.html>
- <sup>xxx</sup> Fish and Fish Habitat Protection Program's Engagement Platform, <https://talkfishhabitat.ca/>
- <sup>xxxi</sup> 2019 Spring Reports of the Commissioner of the Environment and Sustainable Development Report 1 – Aquatic Invasive Species, [https://www.oag-bvg.gc.ca/internet/English/parl\\_cesd\\_201904\\_01\\_e\\_43307.html](https://www.oag-bvg.gc.ca/internet/English/parl_cesd_201904_01_e_43307.html)
- <sup>xxxii</sup> Grass Carp, <https://www.dfo-mpo.gc.ca/species-especes/profiles-profil/grasscarp-carperoseau-eng.html>
- <sup>xxxiii</sup> Species at Risk Act, <https://laws-lois.justice.gc.ca/eng/acts/s-15.3/>
- <sup>xxxiv</sup> Pacific Salmon Strategy Initiative, <https://www.dfo-mpo.gc.ca/campaign-campagne/pss-ssp/index-eng.html>
- <sup>xxxv</sup> Wild Atlantic Salmon Conservation Policy, <https://www.dfo-mpo.gc.ca/reports-rapports/regs/wildsalmon-atl-saumonsauvage-eng.htm>
- <sup>xxxvi</sup> Protecting Canada's endangered whales, <https://www.dfo-mpo.gc.ca/campaign-campagne/protectingwhales-protegerbaleines/index-eng.html>
- <sup>xxxvii</sup> Evaluation of Grants and Contributions Programming in the Ecosystems and Oceans Science Sector, <https://www.dfo-mpo.gc.ca/ae-ve/evaluations/20-21/gcpeos-pscseo-eng.html>
- <sup>xxxviii</sup> Global Ocean Science Report, <https://en.unesco.org/gosr>
- <sup>xxxix</sup> Departmental Sustainable Development Strategy 2020-2023, <https://www.dfo-mpo.gc.ca/sds-sdd/2020-2023/index-eng.html>
- <sup>xl</sup> GC InfoBase, <https://www.tbs-sct.gc.ca/ems-sgd/edb-bdd/index-eng.html#start>
- <sup>xli</sup> Minister's mandate letter, <https://pm.gc.ca/en/mandate-letters/2021/12/16/minister-fisheries-oceans-and-canadian-coast-guard-mandate-letter>
- <sup>xlii</sup> Oceans Protection Plan, <https://tc.canada.ca/en/initiatives/oceans-protection-plan/report-canadians-investing-our-coasts-through-oceans-protection-plan#preserving>
- <sup>xliiii</sup> Evaluation of the Shore-based Asset Readiness (SBAR) Program, <https://www.dfo-mpo.gc.ca/ae-ve/evaluations/20-21/sbar-epat-eng.html>
- <sup>xliv</sup> 2021 Speech from the Throne, <https://www.canada.ca/en/privy-council/campaigns/speech-throne/2021/speech-from-the-throne.html>
- <sup>xlv</sup> Global Ocean Science Report, <https://en.unesco.org/gosr>
- <sup>xlvi</sup> DFO Departmental Sustainable Development Strategy 2020 to 2023, <https://www.dfo-mpo.gc.ca/sds-sdd/2020-2023/index-eng.html>
- <sup>xlvii</sup> GC InfoBase, <https://www.tbs-sct.gc.ca/ems-sgd/edb-bdd/index-eng.html#start>
- <sup>xlviii</sup> Minister's mandate letter, <https://pm.gc.ca/en/mandate-letters/2021/12/16/minister-fisheries-oceans-and-canadian-coast-guard-mandate-letter>
- <sup>xlix</sup> Prime Minister announces renewal of the Canadian Coast Guard fleet, <https://www.tpsgc-pwgsc.gc.ca/app-acq/amd-dp/mer-sea/sncn-nss/apropos-about-eng.html>
- <sup>l</sup> National Shipbuilding Strategy, <https://www.tpsgc-pwgsc.gc.ca/app-acq/amd-dp/mer-sea/sncn-nss/apropos-about-eng.html>
- <sup>li</sup> Government of Canada announces Polar Icebreakers to enhance Canada's Arctic presence and provide critical services to Canadians, <https://www.canada.ca/en/canadian-coast-guard/news/2021/05/government-of-canada-announces-polar-icebreakers-to-enhance-canadas-arctic-presence-and-provide-critical-services-to-canadians.html>
- <sup>lii</sup> Canadian Coast Guard announces over \$28 million in vessel maintenance contracts to shipyards across Canada, <https://www.canada.ca/en/canadian-coast-guard/news/2021/12/canadian-coast-guard-announces-over-28-million-in-vessel-maintenance-contracts-to-shipyards-across-canada5.html>

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- liii Canadian Coast Guard's latest icebreakers, <https://www.ccg-gcc.gc.ca/fleet-flotte/icebreaker-brise-glace-eng.html>
- liv Speech from the Throne, <https://www.canada.ca/en/privy-council/campaigns/speech-throne/2021/speech-from-the-throne.html>
- lv Green Government Strategy: A Government of Canada Directive, <https://www.canada.ca/en/treasury-board-secretariat/services/innovation/greening-government/strategy.html>
- lvi Speech from the Throne 2021, <https://www.canada.ca/en/privy-council/campaigns/speech-throne/2021/speech-from-the-throne.html>
- lvii DFO Departmental Sustainable Development Strategy 2020 to 2023, <https://www.dfo-mpo.gc.ca/sds-sdd/2020-2023/index-eng.html>
- lviii GC InfoBase, <https://www.tbs-sct.gc.ca/ems-sgd/edb-bdd/index-eng.html#start>
- lix Speech from the Throne 2021, <https://www.canada.ca/en/privy-council/campaigns/speech-throne/2021/speech-from-the-throne.html>
- lx Reconciliation Strategy, <https://www.dfo-mpo.gc.ca/fisheries-peches/aboriginal-autochtones/reconciliation-eng.html>
- lxi *United Nations Declaration on the Rights of Indigenous Peoples Act*, <https://laws-lois.justice.gc.ca/eng/acts/U-2.2/>
- lxii Call to Action on Anti-Racism, Equity, and Inclusion in the Federal Public Service, <https://www.canada.ca/en/privy-council/corporate/clerk/call-to-action-anti-racism-equity-inclusion-federal-public-service.html>
- lxiii Directive on Service and Digital, <https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=32601>
- lxiv Government of Canada Digital Standards, <https://www.canada.ca/en/government/system/digital-government/government-canada-digital-standards.html>
- lxv *Access to Information Act*, <https://laws-lois.justice.gc.ca/eng/acts/a-1/>
- lxvi *Privacy Act*, <https://laws-lois.justice.gc.ca/ENG/ACTS/P-21/index.html>
- lxvii Laboratories Canada, [https://www.science.gc.ca/eic/site/063.nsf/eng/h\\_97809.html](https://www.science.gc.ca/eic/site/063.nsf/eng/h_97809.html)
- lxviii DFO Departmental Sustainable Development Strategy 2020 to 2023, <https://www.dfo-mpo.gc.ca/sds-sdd/2020-2023/index-eng.html>
- lxix Main Estimates, <https://www.canada.ca/en/treasury-board-secretariat/services/planned-government-spending/government-expenditure-plan-main-estimates.html>
- lxx Future-Oriented Statement of Operations, <https://www.dfo-mpo.gc.ca/rpp/2022-23/fin-eng.html>
- lxxi *Oceans Act*, <http://www.laws-lois.justice.gc.ca/eng/acts/O-2.4>
- lxxii *Fisheries Act*, <http://laws-lois.justice.gc.ca/eng/acts/f-14/>
- lxxiii *Species at Risk Act*, <http://laws-lois.justice.gc.ca/eng/acts/S-15.3/>
- lxxiv *Coastal Fisheries Protection Act*, <http://laws-lois.justice.gc.ca/eng/acts/C-33/>
- lxxv *Fishing and Recreational Harbours Act*, <http://laws-lois.justice.gc.ca/eng/acts/F-24/>
- lxxvi *Canada Shipping Act, 2001*, <http://laws-lois.justice.gc.ca/eng/acts/c-10.15/>
- lxxvii *Wrecked, Abandoned or Hazardous Vessels Act*, <https://www.laws-lois.justice.gc.ca/eng/acts/W-12.3/index.html>
- lxxviii Raison d'être, Mandate and Role, <https://www.dfo-mpo.gc.ca/about-notre-sujet/mandate-mandat-eng.htm>
- lxxix Minister's mandate letter, <https://pm.gc.ca/en/mandate-letters/2021/12/16/minister-fisheries-oceans-and-canadian-coast-guard-mandate-letter>
- lxxx Operating Context, <https://www.dfo-mpo.gc.ca/rpp/2022-23/annex-eng.html>
- lxxxi GC InfoBase, <https://www.tbs-sct.gc.ca/ems-sgd/edb-bdd/index-eng.html#start>
- lxxxii Supplementary Information Tables, <https://www.dfo-mpo.gc.ca/rpp/2022-23/tables-eng.html>
- lxxxiii *Report on Federal Tax Expenditures*, <https://www.canada.ca/en/department-finance/services/publications/federal-tax-expenditures.html>